

THE
ARCHITECT
& BUILDING NEWS

26 JANUARY 1956

VOL 209

NO. 4

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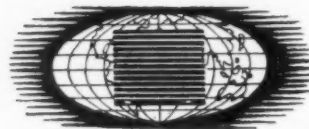
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Edwin Gunn's book, "Modern Building Technique," was published in 1939 and it immediately achieved success as a sound, practical handbook for architects, students and building craftsmen. Based on the author's experience of a lifetime, it provided the reader with first-hand knowledge, proved on the building site.

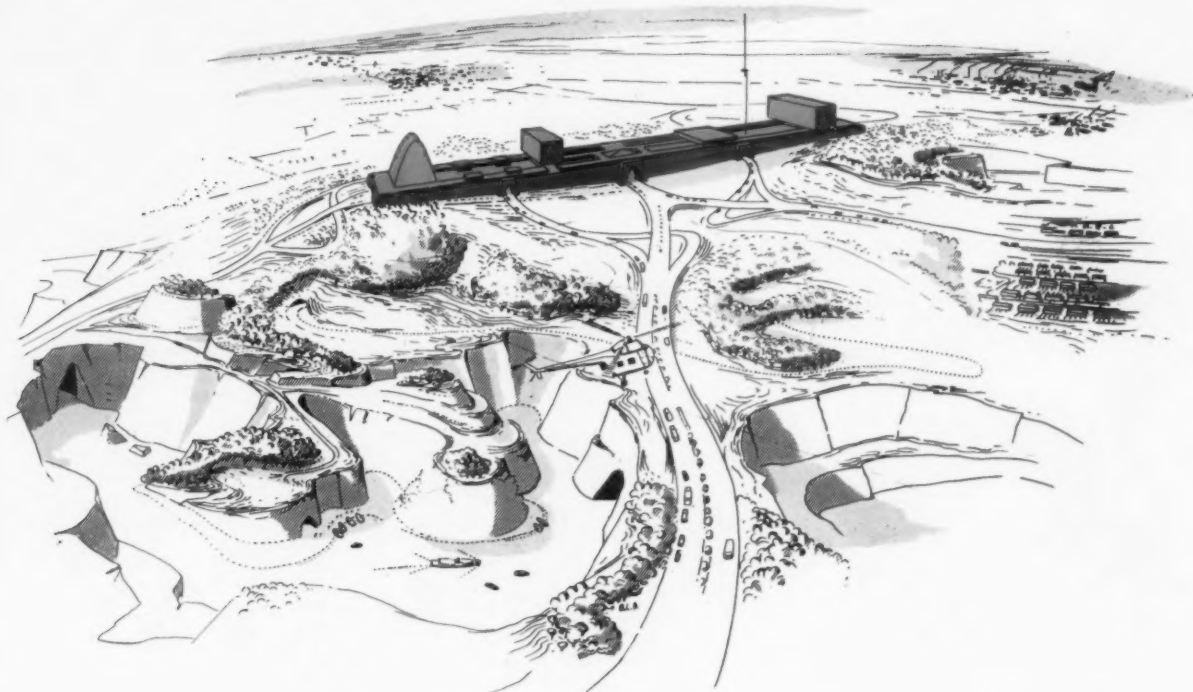
There have been many developments in house-building techniques since 1939, but the steady flow of enquiries over the years for this book has indicated its lasting usefulness. It was therefore decided to publish a third edition, with a change in the title, and for this purpose the text has been revised by Mr. John Brandon-Jones, A.A.Dip., A.R.I.B.A., a Vice President of the Architectural Association.

The layout of the original work has been retained. A noteworthy feature is the extensive reference to British Standard Specifications and to Reports and Bulletins of the Building Research Station and trade associations.

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THE HIGH MARKET PROJECT

by the Glass Age Development Committee

This is an imaginary project designed under the direction of a committee of architects and engineers, convened by Pilkington Brothers Limited, called the Glass Age Development Committee which consists of G. A. Jellicoe, F.R.I.B.A., Edward D. Mills, F.R.I.B.A., and Ove Arup & Partners. The Committee was invited to suggest solutions to future problems of town and country planning, and its first project, the Soho area in London was published in advertisements between October 1954 and April 1955, and a large scale model of it was shown on Pilkington's stand at the Building Trades Exhibition in November 1955.

This second project has been designed by Gordon and Eleanor Michell, A/A.R.I.B.A. Although it is wholly imaginary and intended only to show the sort of development that might take place before the year 2000 A.D., it could be carried out now. A preliminary survey of the project and the chief proposals are given on the two pages that follow. Full details of the scheme will be published in the form of advertisements during 1956.

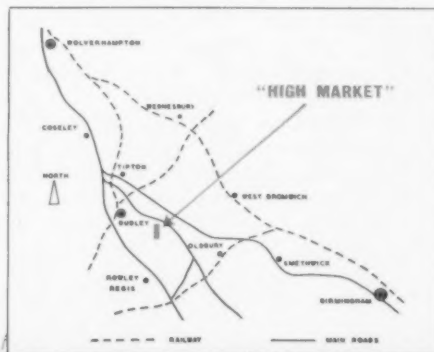
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THE OBJECT

To create a large-scale shopping centre which could serve, and supplement the shopping facilities of, a group of cities and towns in the Midlands.

THE LOCALITY

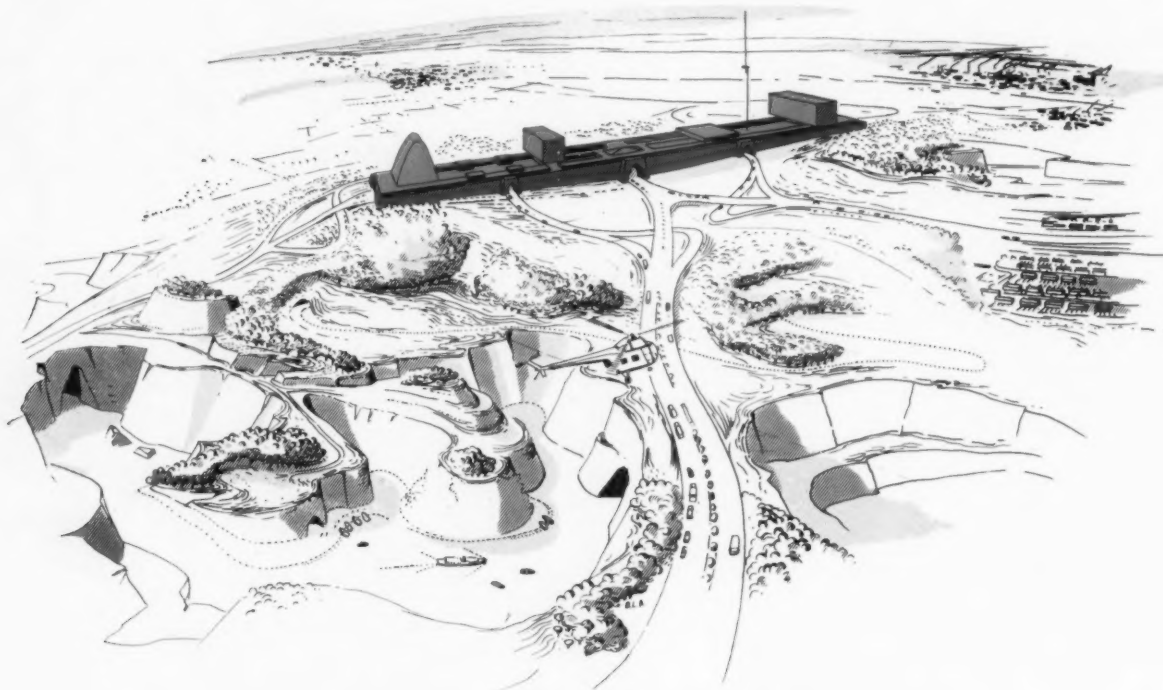
Located in the Black Country area, it is called "High Market" because it would occupy a commanding site on high ground. Its relationship to the surrounding country is shown in the view above, its actual position is marked in blue on the map.



PILKINGTON BROTHERS LIMITED



The Glass Age Development Committee



THE HIGH MARKET 1

Preliminary Survey

The "High Market" could supplement existing shopping facilities for the populations of Birmingham, Wolverhampton, West Bromwich, Dudley, Walsall, Smethwick, Oldbury, and the adjacent areas. It is sited on a piece of high ground, namely Turner's Hill and Darby's Hill, and would be visible to the whole of the surrounding country. "High Market" would be an out of town shopping centre of the American country market type, which people could visit once or twice a week, to find a large range of goods. Shops in cities of the area could have branches there.

This is a logical economic solution to existing congestion and would ease the pressure of traffic in the cities, and restore leisure and pleasure to shopping.

All the proposals made for such a project are practical possibilities; the techniques and materials for executing them exist now. Their detailed application to the "High Market" project will be published in further reports.

The Proposals

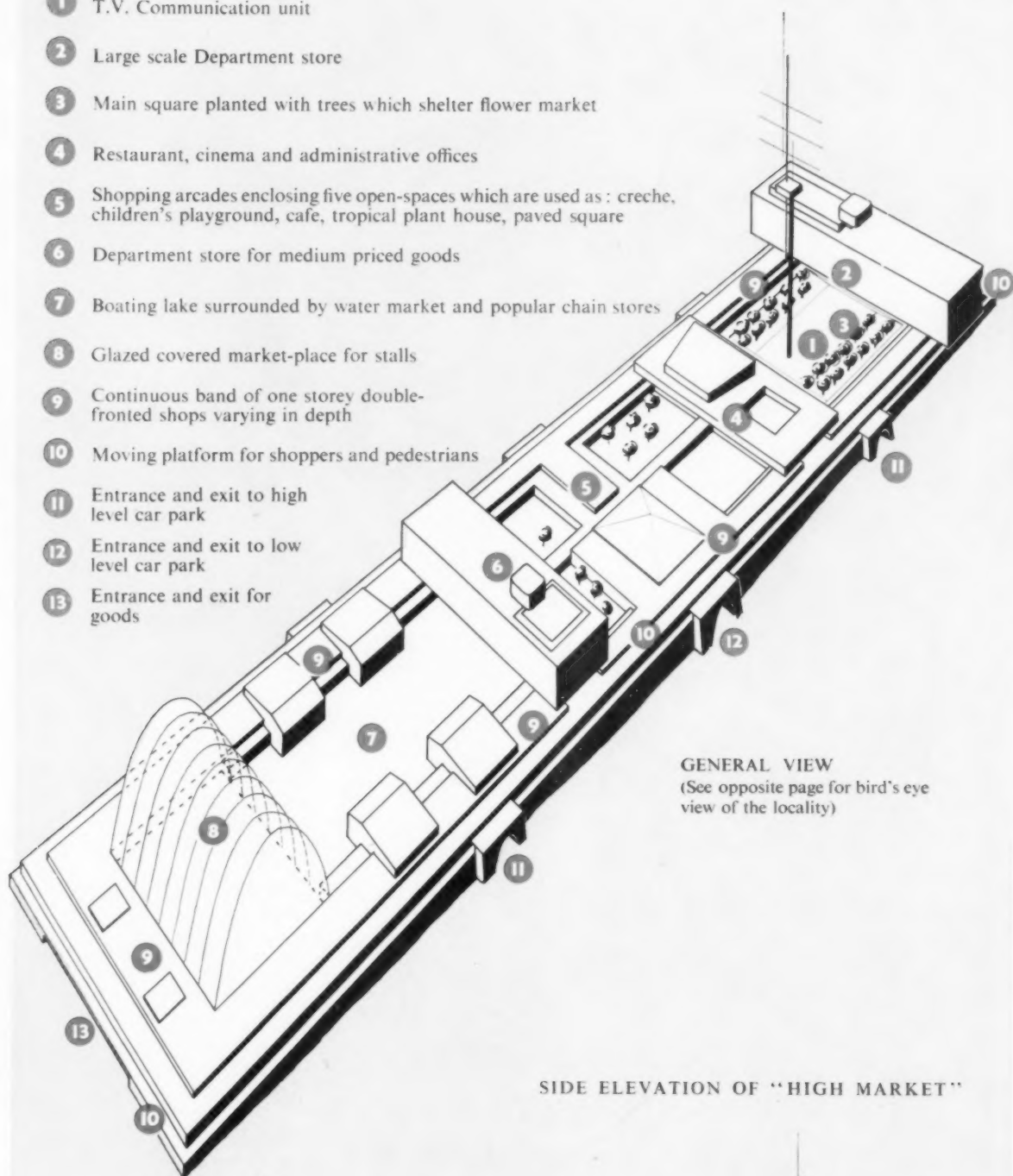
"High Market"—if it was ever built—would be 2,000 feet long and 400 feet wide, stretching north and south from the crest of one hill to the crest of the other with the general shopping level on top; the service floor at hilltop level, with two levels below this for parking 3,500 cars. It would consist of a unified building, containing 1,000,000 square feet of shopping space, with ample service facilities, and accommodation for a great variety of types and sizes of shops. An intimate human scale for shopping would thus be created and preserved.

Access would be provided by road and rail (perhaps supplemented by the adoption of some monorail system), and by helicopter. The immediate surroundings would be landscaped, making use of the existing quarries, spoil heaps and canals. The quarries are shown in the foreground of the view above. A general view of the scheme is shown on the opposite page.



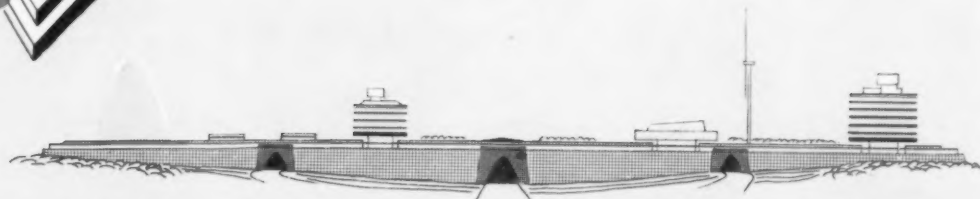
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- ⑥ Department store for medium priced goods
- ⑦ Boating lake surrounded by water market and popular chain stores
- ⑧ Glazed covered market-place for stalls
- ⑨ Continuous band of one storey double-fronted shops varying in depth
- ⑩ Moving platform for shoppers and pedestrians
- ⑪ Entrance and exit to high level car park
- ⑫ Entrance and exit to low level car park
- ⑬ Entrance and exit for goods



GENERAL VIEW
(See opposite page for bird's eye view of the locality)

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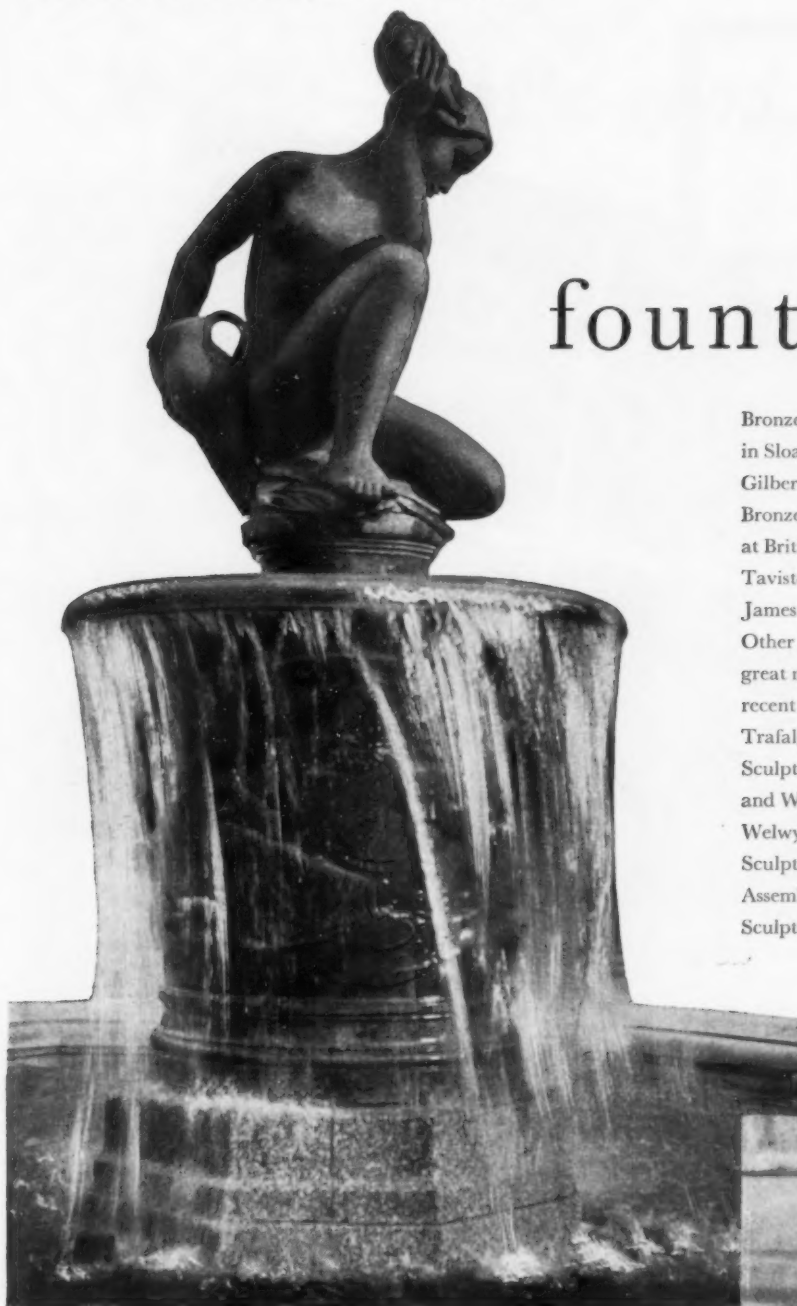
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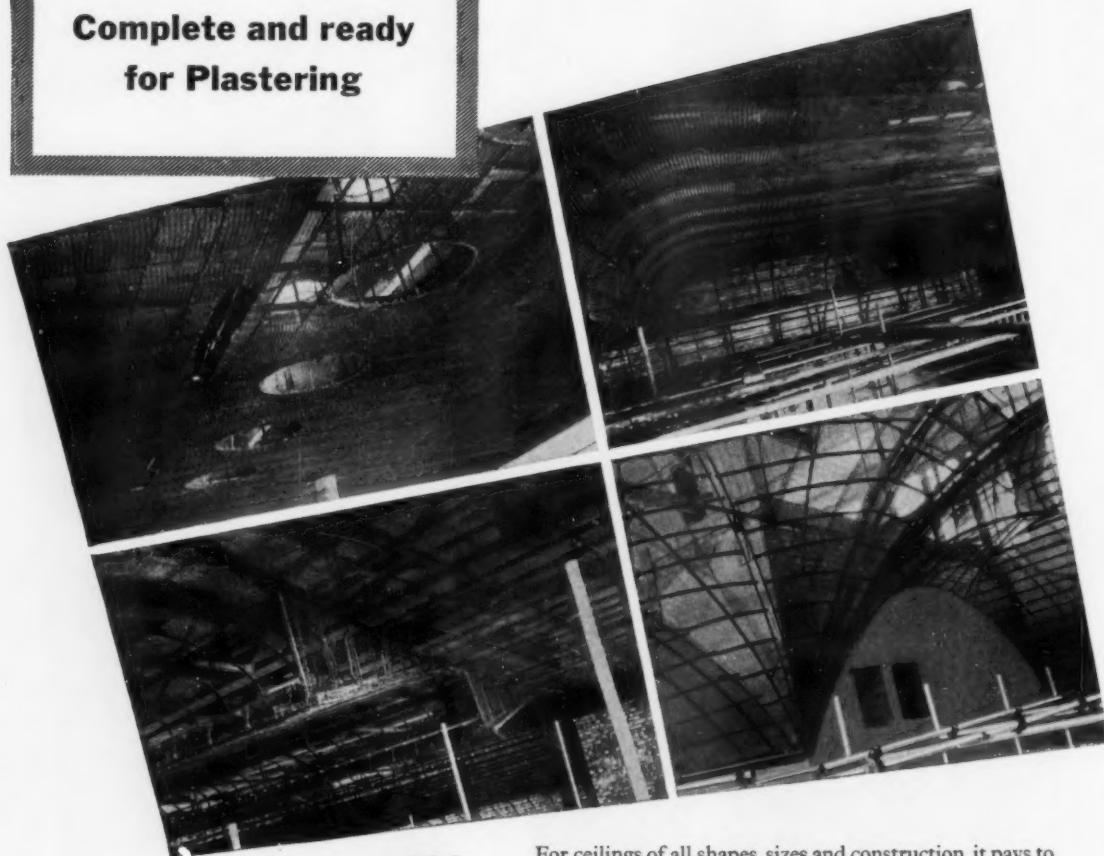
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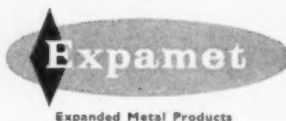


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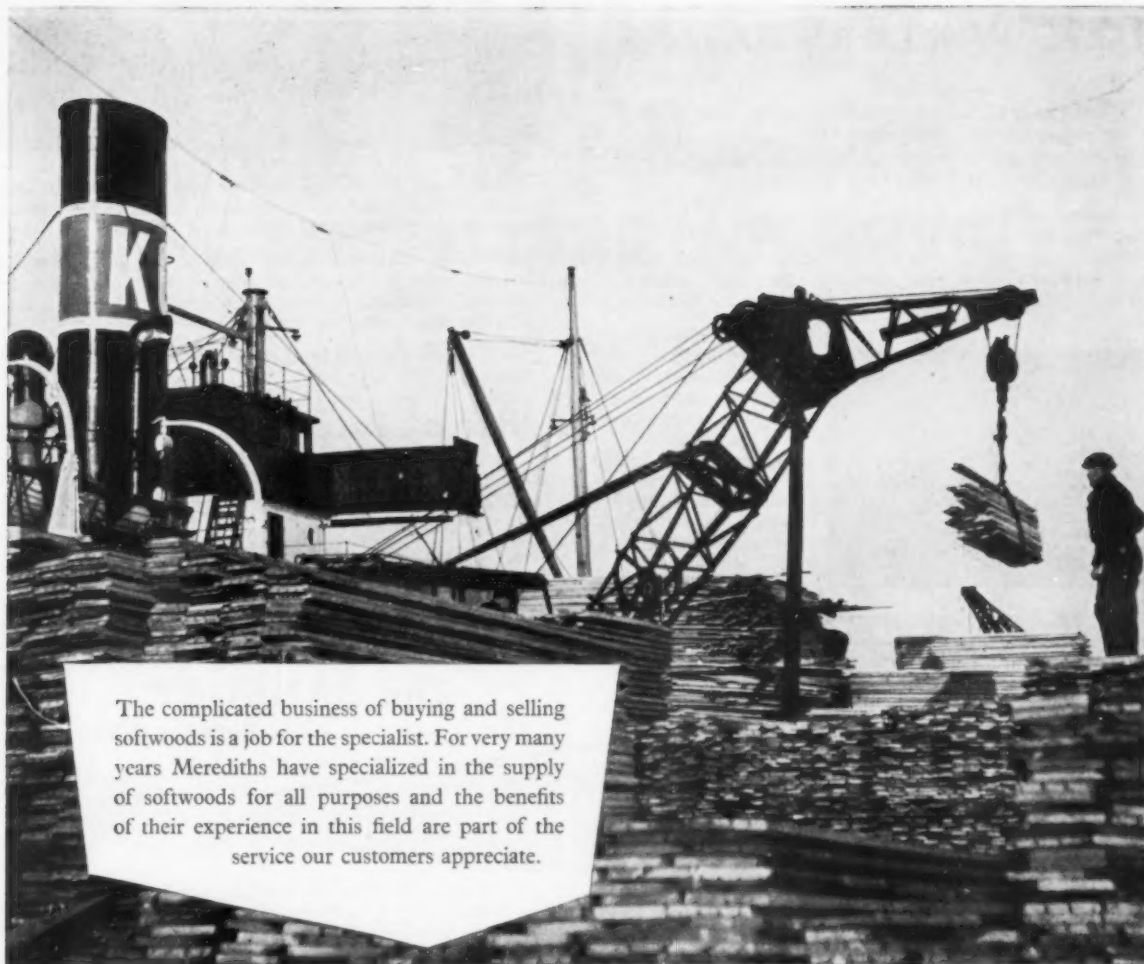
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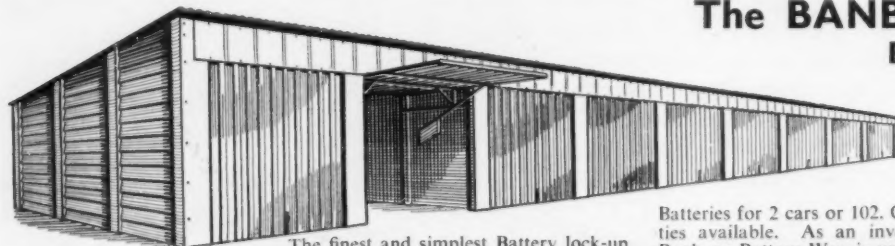
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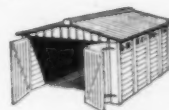
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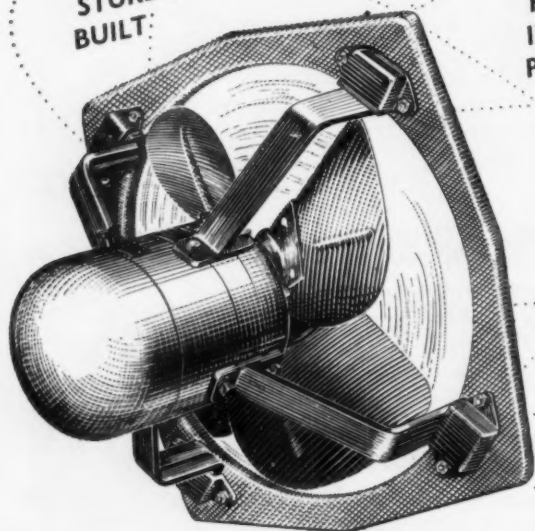
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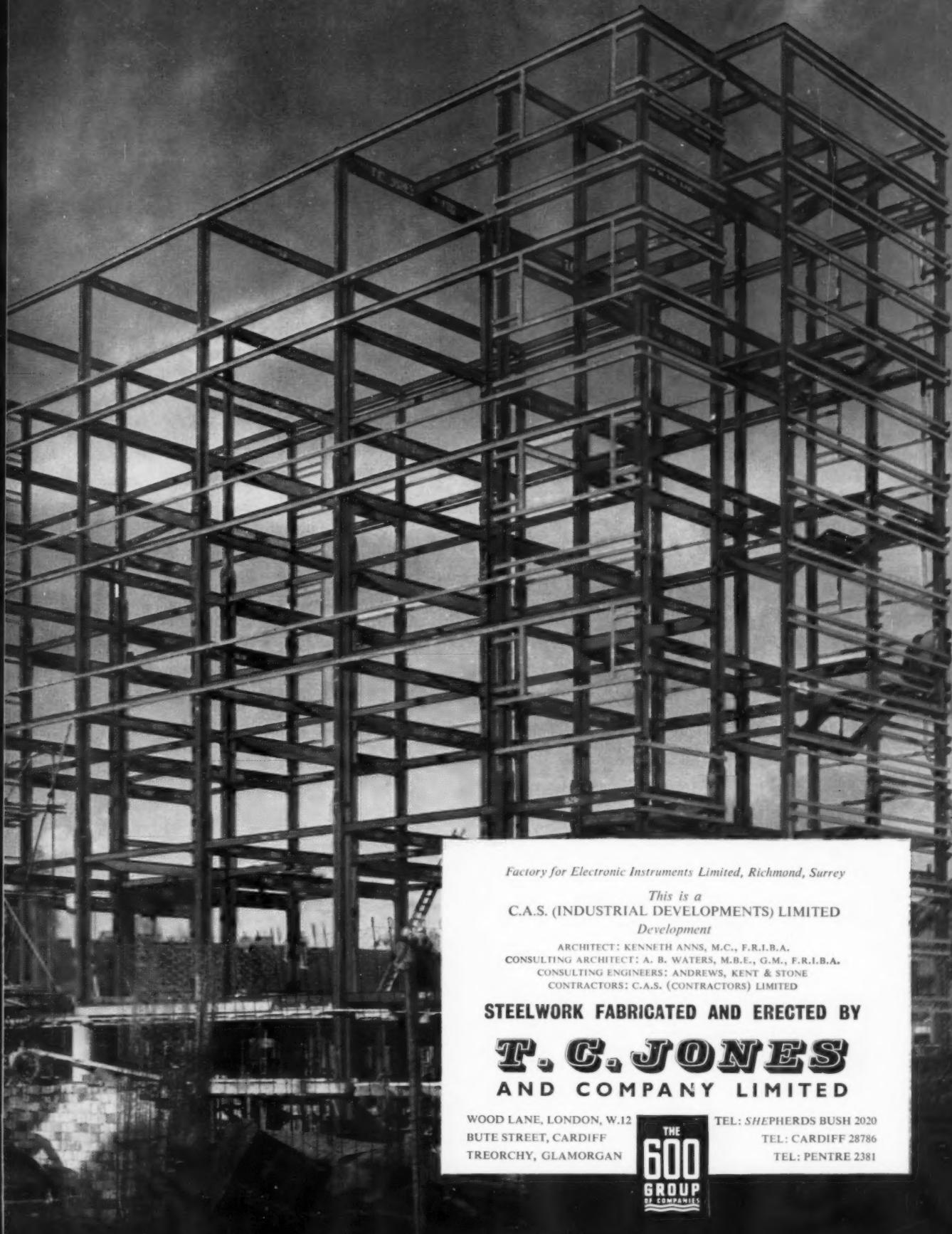
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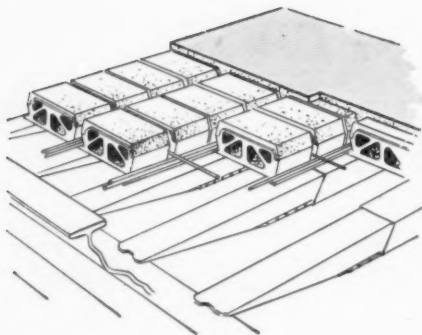
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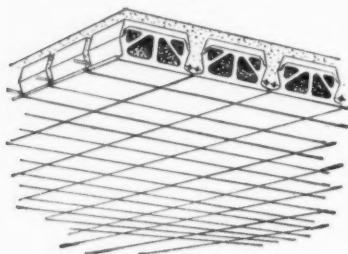
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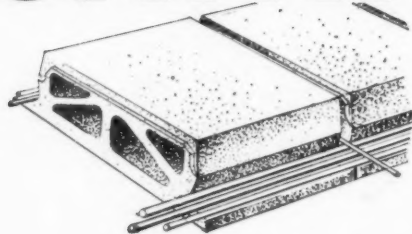
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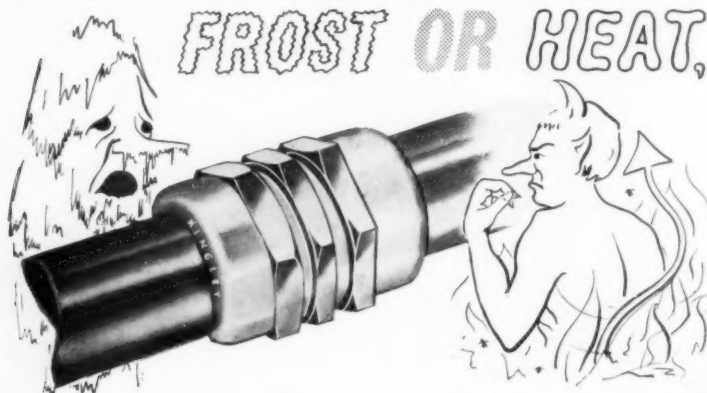
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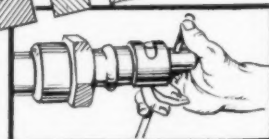
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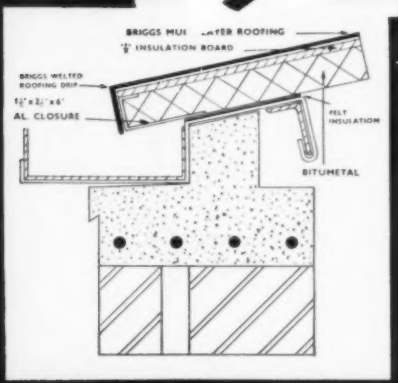
TELEGRAMS : CHAMPION · KINGS LANGLEY

TO ARCHITECTS ABOUT TO PLAN ROOFS



Save on Steelwork!

R.C. Primary School,
Kings Park, Glasgow.
Architect:
Thomas S. Cordiner, F.R.I.B.A.



*** This roof weighs
4 lbs. per sq. ft.**

"BITUMETAL" Roofing to standard specification weighs only 4 lbs. per sq. ft. Therefore, when you specify "BITUMETAL", you materially reduce the amount of steel required to support a roof.

"BITUMETAL" now provides a complete range of aluminium decks for short, medium and long span roof construction. Every roof up to a 10 ft. span can

now enjoy the extra advantages of lightness in weight, efficient insulation, and a reflective ceiling. The roof is also completely draught and dust proof. Full technical information regarding "BITUMETAL" and interesting data regarding the cure of roof condensation may be obtained from any of our Area Managers at the undernoted centres.



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STRAMIT

2" BUILDING SLABS

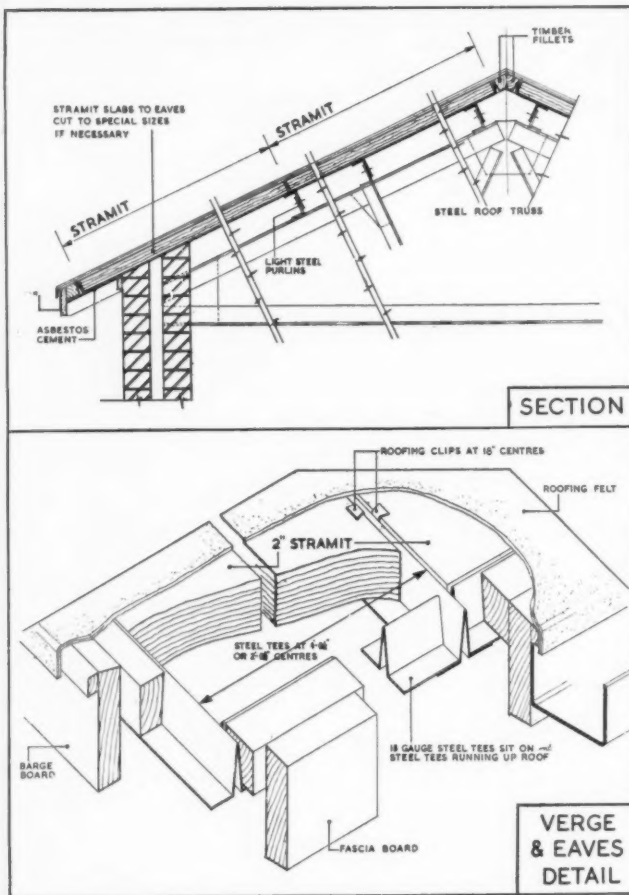
AND U

—the measure of heat-loss through a construction, in B.Th.U.'s. per hour over one square foot of its area, when the temperature-difference between its two sides is 1°F.

Even in these enlightened times factories are still erected without thermally insulated roofs.

In the majority of cases the disadvantages of unrestricted heat-losses are only realised when the inordinately high fuel bill arrives; with the result that a suspended ceiling has to be erected to minimise the heat-losses—a job which involves additional heavy expense, much inconvenience and interruption of production.

For those who appreciate the value of thermal insulation, we recommend the adjacent system of factory roof construction which gives the cheapest and most efficiently insulated roof available to the Building Industry today. It consists of Stramit Slabs covered with built-up roofing felt: the 'U' value is 0.23.



**No other building slab
possesses**

ALL these properties

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NATIONAL SERVICE

IT seems probable that some form of conscript national service will remain in force for many years to come, for full industrial employment would denude the fighting services of the manpower needed for policing the Commonwealth even if there were such an easing of international tension that Western European and Middle East garrisons could be substantially reduced.

The hiatus in a young man's training for a profession or trade caused by his period of national service is a matter of concern and increases in seriousness with the increasing length and complexity of the man's technical training. In a profession like architecture the young man needs a good educational background, an aptitude for, and settled habit of academic study and an unbroken period from his first year's training to the completion of some four or five years' practical experience as a qualified architect; in all some ten to twelve years to produce the most competent professional man.

With national service intervening, this unbroken period is not possible; so it is a matter of concern to introduce the break where it will do least harm. Some architectural students prefer it in the middle, following the passing of the intermediate examination. In most professions, however, the only alternatives accepted are before the course of training or after completion and qualification. The choice must depend on the circumstances and character of the individual.

With the recent change in the age of call-up there are now very serious objections to doing national service before starting on the course of architectural studies. The boy leaving school for the services before starting on professional training has a considerable period of time to fill in before his call-up. During his two years of service he loses the habit of academic study and indeed of mental concentration of any sort. By the time he has completed his national service and his full course of architectural training his age will be not far short of thirty.

To obtain deferment and complete the course of training to the point of passing the final examination seems to be the better course for most people. For those with sufficient financial resources to attend a full-time school the habit of study will continue unbroken; while those who have to qualify "the hard way" can earn their keep as junior assistants in the meantime. Even so, the hiatus comes just after qualification and before the young architect has really had enough practical experience to become of much use in the profession. This is a handicap not confined to the architectural profession. There are in fact about three professions only in which the newly qualified man can be sure of continuing to practise while doing his national service. They are doctors, dentists and accountants. In pretty well all the other professions, with some exceptions among engineers, the same hiatus must occur.

Parents of some architectural students, and students themselves protest at their not being drafted into the Royal Engineers or, if drafted, at not being given architectural work to do. There seems to be a widespread idea that the Royal Engineers undertake architectural and building work on a wide scale. During the war extensive constructional work was done by the Royal Engineers but in those days a great many civilian activities were undertaken by people in uniform. In peacetime practically all building work for the services is contracted out to civilian organisations.

The desire to use one's newly acquired knowledge while in the services is understandable, as also is a certain scorn of the purely military knowledge which the conscript is required to amass, much of it being to a trained professional mind of a childishly elementary nature. Yet the hard fact remains that conscript national service is designed for the individual to serve the community and to serve it in the way that benefits the community rather than the individual.

An interesting and informative article on national service was published in the Royal Engineers' Journal

for September, 1955. This showed clearly the difficulties the military authorities were up against in the allocation of men to duties. After some years of experience they have a fairly accurate knowledge of the proportions of men of various abilities in each intake and can plan the allocation ahead, but such plans are upset by each emergency that crops up; Korea, Kenya, Cyprus; upsetting the trooping programme and therefore the manpower requirements in each arm of the service. With all the other complications that also arise it usually turns out that some specialist requirements cannot be met exactly while others can be filled several times over. In deciding how to allocate a man, his intelligence and educational standards, including professional qualifications, are considered first but great weight is also given to his medical category and personal predilections. In considering the individual even apart from the vacancies it will be seen that there are often factors in conflict. For instance, vacancies for men with ability as draughtsmen may be met from men of lower medical category while there is a shortage of men

of high medical category to train as fighting infantrymen. The fit young architect does not therefore get posted as a draughtsman, R.E.

It has been put quite bluntly by a military spokesman who said that there was not very much in the technical training of an architect that was of direct and immediate use in the fighting services. There were, however, the less obvious qualifications of intelligence, education and initiative. He commented on the proportion of young architects who completed their two years' service without getting a commission or even, in some cases, non-commissioned rank. His view was that by training and environment the young professional man should be ready material for the officer cadre in any arm of the service.

There has been frequent reference to the architect as the leader of the building team. The young architect's training can continue during national service with benefit to himself and the country if he closes his eyes to the mirage of architecture in the army and, instead, sets about learning to become a leader of men.

EVENTS AND COMMENTS

LMBA ANNUAL LUNCH

I find that I look forward to this cheerful occasion each year at the Park Lane Hotel. The word cheerful should perhaps be qualified by saying that it has become more cheerful each year. On my first visit the builders, hemmed in with every kind of difficulty were not very cheerful. Their only troubles now seem to be first that their order books are almost too full and second that there is always a chance that we might one day have another socialist government.

My neighbours both took the view that the Building industry was the worst paid of any industry, meaning that there was less money to be made from it. Indeed one of my neighbours assured me that Master builders were worse rewarded than architects. He said he had done millions of pounds of work with only five per cent to cover all his overheads and profit. I felt sorry and incredulous at the same time. However he assured my other neighbour that his firm had as much work as it wanted and as the other neighbour was about to go on a six weeks' cruise to the Far East I stopped worrying and concentrated on enjoying my lunch.

Pilkington Bros would have turned pale had they heard our next conversation. Did I think the age of glass was over? and from that, how large should a window be to enclose a view? was it necessary to make a whole wall of glass? I couldn't think of a suitable reply except that much depended on how close you stood to the window. I don't remember the phrase which my neighbour used to describe modern architects but it was not very complimentary.

It was naturally all good humoured chatter but under-

neath was the great divide. What a pity it is that we don't all have the same outlook. Which outlook? Ah! there's the rub!

About four hundred builders in a bunch is an impressive sight but I fear that few of them were very interested in the prepared statement, I could not call it a speech, read by Mr. Charles Connell, President of the British Employers Federation (The top employers union). For real dry-as-dust stuff this was it. In the past on this occasion we have been accustomed to sparkling words from the Minister of Works. This year the new Minister was present but his thunder was reserved for the NFBTE dinner and he only said a few polite words.

I am always impressed by the use which the LMBA makes of its past-presidents. Many of them are as busy as bees as chairmen of committees, while Mr. David Woodbine Parish is Hon. Treasurer.

ZINC DEVELOPMENT

The Zinc Development Association has come to town from Oxford and is now most elegantly installed at 34 Berkeley Square. This mid-victorian town house has been beautifully done up, decorated and furnished by James Cubitt & Partners. The best has been made of ornate plaster cornices and other period decoration and the furniture is a most pleasant mixture of ancient and modern. I am sure that much of the credit for the scheme should go to the ZDA's director, Mr. Lewis Stubbs who knows very clearly what he wants and that includes a great deal of white paint.

I could not help being very envious of Mr Stubbs' own office which has room to swing several cats, a revolving chair a desk large enough to lie on and one of three loud hailing devices covered in switches. Thus equipped oh how executive I could be!

In addition to the Director's office there is a library and a room for exhibitions, a cinema, and several other offices housing technical departments which are at your service to answer all your questions about Zinc.

Owing to the dispute in the Printing Trade this issue has had to be reduced in size, and copies may be late in reaching readers. To all who are inconvenienced in any way, we offer our sincere regrets in circumstances beyond our control.

NEW BARBICAN ENQUIRY

I hope you are not missing reports of this planning enquiry in the daily papers. The Times, Manchester Guardian, Daily Telegraph and evening papers have all referred to it. The scene in the Guildhall on Monday was impressive. Mr. S. J. Docking, the Ministry of Housing & Local Government's chief inspector sat in lonely state at a very large table with the witness stand on his right. In the hall below the protagonists were ranged on either side. Council, witnesses, lawyers galore; and a hall well filled with the general public, Professor Holford and members of the L.C.C. reconstruction group among them.

The proceedings reminded me of a cricket match; with the Barbican Committee batting first. Sir Gerald Barry led the innings, read his brief, was cross examined by Mr. Williams, Q.C. for the Corporation and other Council with watching briefs, and finally by the Committee's own Council, Mr. Harris who is well worth watching. Mr. Brian Anstey was first wicket down and after him Sergei Kadleigh, following the same procedure.

I do not know how many witnesses are going to be called but at the rate of one and a half a day the proceedings will be lengthy indeed. The enquiry is being resumed at Gresham College.

NIGERIAN DEVELOPMENTS

From the Barbican enquiry I went to see and hear of millionaire schemes of a different order. Pioneer stuff; hacking roads through jungle and aggregate blasted from the virgin rock; miles of road making. All this was part of a colour film of Richard Costain and Associated Company's work in Nigeria, where they have completed 400 miles of road-making since 1950.

The Queen will see some of Messrs. Costain's work during her tour of Nigeria in February. Her Majesty will open the Apapa wharf, Lagos (cost: £4½m) and the Ijora "B" Power Station (£3m) and will visit also the Oji River power station and Ibadan hospital, both under construction. The last named is the first teaching hospital to be built in Nigeria and the architects were Watkins, Gray & Partners.

ABNER

Correspondence

Dear Sir,

I was pleased to find that the industrial handbook "New Fields for Industry" published by the Association as part of the efforts to attract new industry to North East Lancashire, was referred to in the issue of your magazine for January 5th.

The second paragraph of your review refers to the illustrations of standard factories which appear on pages 29-31 and from an architectural point of view you do not seem to like them.

I think it should be made clear that these standard factories are Government owned and are of the type which were put up in some of the Development Areas, in some cases in advance of requirements. No such factories have been built in North East Lancashire.

This Association does not build factories but endeavours to attract industry to Lancashire and Merseyside.

I think it should be mentioned that Government factories erected in development areas are paid for by the nation and the first essential is that they shall be practical and not costly.

Yours faithfully,

GERALD S. F. RITSON,

Director.

Lancashire and Merseyside Industrial Development Association.

Notes from the Minutes of the R.I.B.A. Council Meeting on 10 January

R.I.B.A. Award for Distinction in Town Planning

The R.I.B.A. Award for Distinction in Town Planning was conferred upon Mr. Johnson Blackett, F.R.I.B.A., and Mr. Hugh Wilson, O.B.E., A.R.I.B.A.

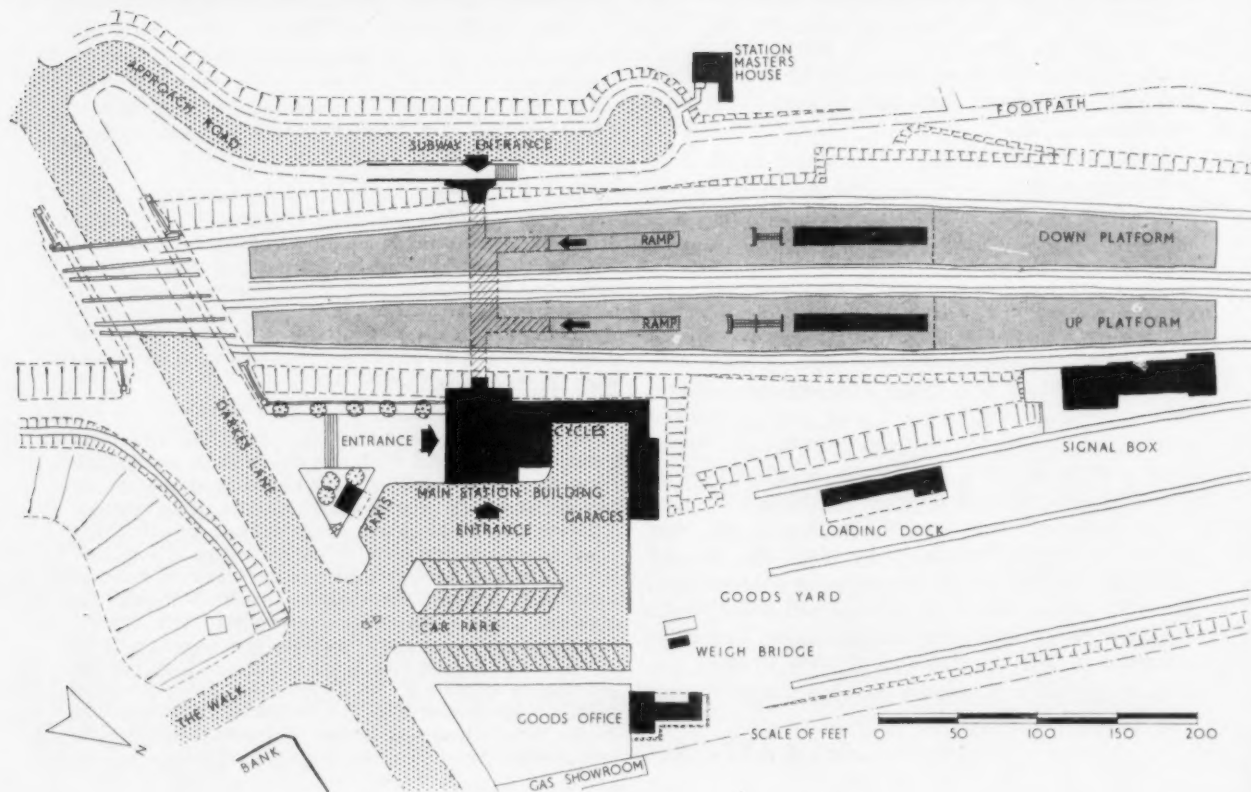
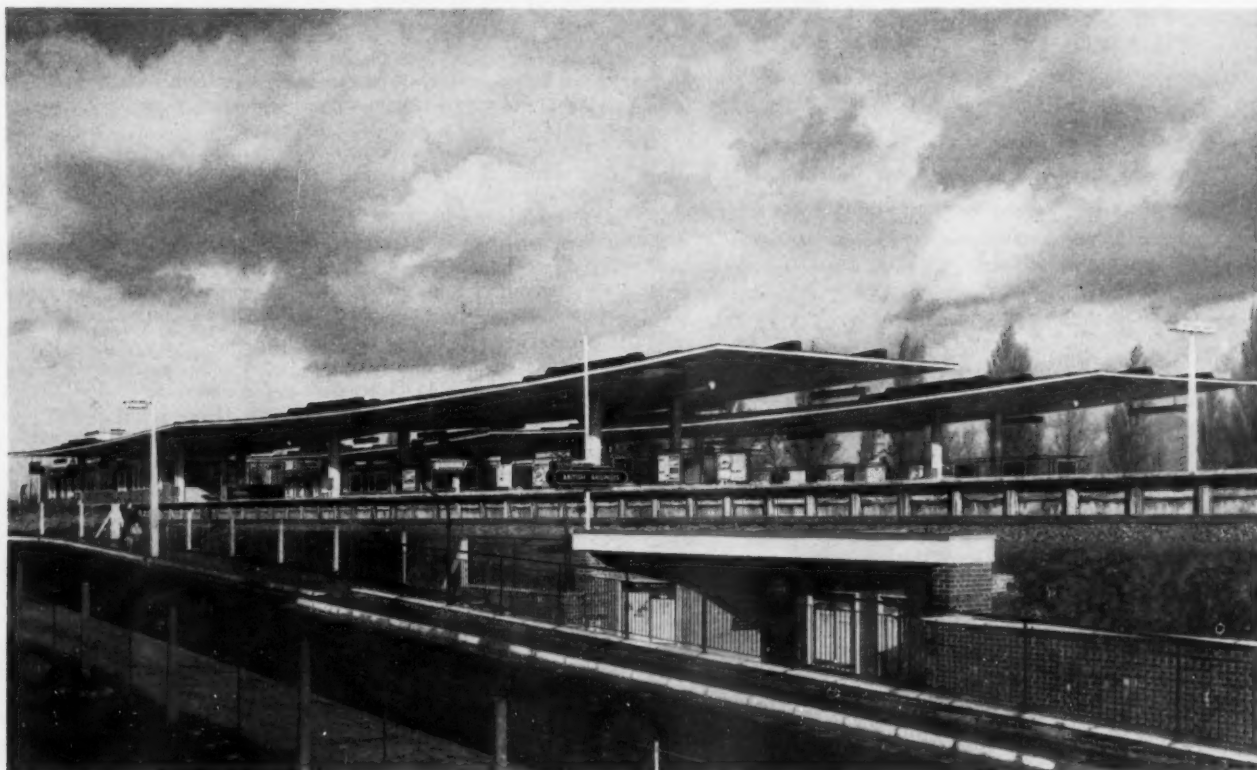
Standardisation of the Shape and Sizes of Trade Publications.

The Council approved a recommendation of the Science Committee that manufacturers should be urged to consider the desirability of producing their trade and technical literature to the standard size specified in B.S.S. 1131:1955. In order to give wide publicity to the advantage of this step it was agreed to publish an article on the subject by Mr. Gontran Goulden, A.R.I.B.A., in the R.I.B.A. Journal and to make available copies of it to the architectural and advertising press. It was also agreed to draw the attention of the principal associations of advertising practitioners to the matter and to enlist the support of members in a campaign to bring to the attention of manufacturers the advantages of the British Standard.

Delays in Securing Planning Approval

The Council considered a report from the Town and Country Planning and Housing Committee on this subject. On their recommendation it was agreed to prepare a note for publication in the R.I.B.A. Journal again drawing attention to the advantage to be secured by consulting planning officers informally at an early stage in a project. It was agreed that where there was any doubt of the likelihood of approval, application should be made for approval in principle before proceeding with detailed designs. It was also agreed to make representations to the Ministry of Housing and Local Government on the importance of speeding up the procedure for securing various approvals by providing for the simultaneous consideration by the various bodies concerned of applications for planning consent.

POTTERS BAR MAIN LINE STATION



FOR THE BRITISH TRANSPORT COMMISSION

chief civil engineer: A. K. TERRIS, M.I.C.E.

regional architect: H. H. POWELL, B.Arch, F.R.I.B.A.

principal assistant architect: R. T. WALTERS, A.R.I.B.A., A.M.I.Struct.E.

architect in charge: JAMES WYATT, A.R.I.B.A., A.A.Dip.

THE widening of the line through Potters Bar Station resulted in the complete demolition of the old station buildings. The Architect's portion of the reconstruction consists of the Signal Box, Covered Bench, Weighbridge Shelter, Goods Offices, Main Station building, finishes to Subways and Ramp, Platform Buildings and the Station Master's House.

The Signal Box contains all-electric colour light signalling equipment including standby diesel generator, linesmen workshops, messroom, etc. The Covered Bench provides covered space for the unloading of wagons and the loading on to road motor vehicles. In The Goods Offices is accommodation for the Yard Foreman, Wages Staff Messroom and lavatory and an office for the Goods Clerks incorporating a public space and counter, book room and cloak room accommodation.

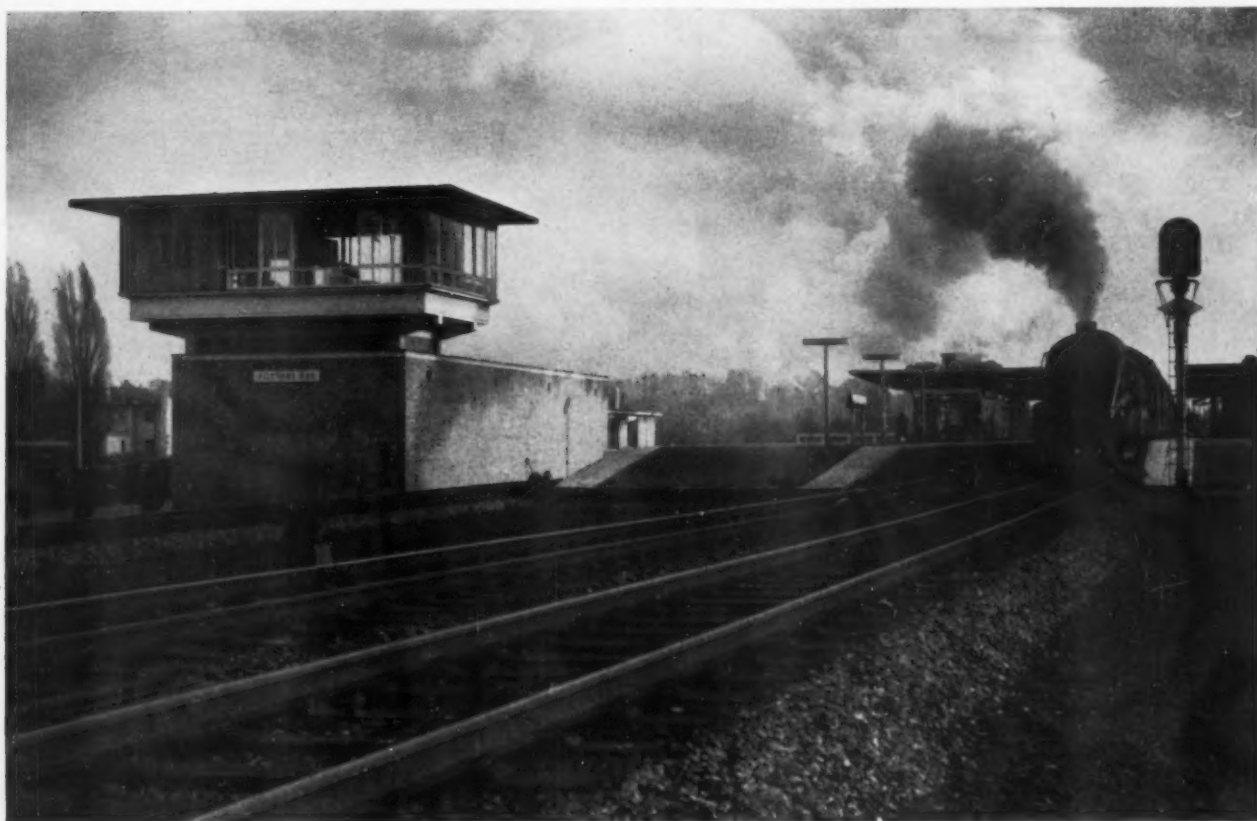
The Main Station Building has 5 lock-up garages, store for 50 bicycles and space for motor cycles, a parcels office for small to-be-called-for parcels, together

with public space and counter incorporating weighing machine, ticket office with two ticket windows to the Booking Hall and ticket counter, together with ticket storage cupboards and two clerks desks, and Booking Hall with space for public telephones, tobacco kiosk, book stall, etc. and a main switch gear room and cleaners' room.

The subway includes four traffic barriers with 4 collapsible gates and two ticket collectors boxes.

The Up side platform buildings include a cleaners' room and store for first-aid equipment, the Station Master's Office, General Waiting Room, Ladies' Waiting Room with communicating Ladies' lavatory and Gentlemen's lavatory. In The Down side platform buildings are a Station Store, Staff Room, General Waiting Room, Ladies' Waiting Room with communicating Ladies' lavatory and Gentlemen's lavatory.

Each platform has a wind break shelter and continuous seating. A Cabmen's shelter was to be provided in the forecourt.





Booking Hall

Potters Bar

Main Line Station

CONSTRUCTION

The Signal Box is of load bearing brick construction with precast concrete roof slabs, with the Signal Room independently supported on an R.C. platform supported on four R.C. columns. The Signal Room above the R.C. platform consists of a light steel roof covered with steel decking supported on 2" solid steel columns, the walls consisting either of windows or timber cladding. The covered bench is constructed of pre-cast R.C. 'Tee' frames with pre-cast pre-stressed concrete roof slabs spanning between frames. The loading platform and lock-up store is of brick construction.

The Goods Offices are of mixed load bearing brick construction with in-situ R.C. slab roof and R.C. portal frames with pre-cast concrete roof slabs with brick panel walls.

The Main Station Building is constructed with in-situ R.C. beams, slabs, and columns on reinforced ground slab with load bearing external brick walls.

The platform buildings are constructed with unpierced brick panels forming piers linked by braced light steel angles supported on tubular columns behind the windows with a light timber roof.

All buildings have solid floors.



The granite sets round the trees are laid in sand with a wide joint

SECTION: B B



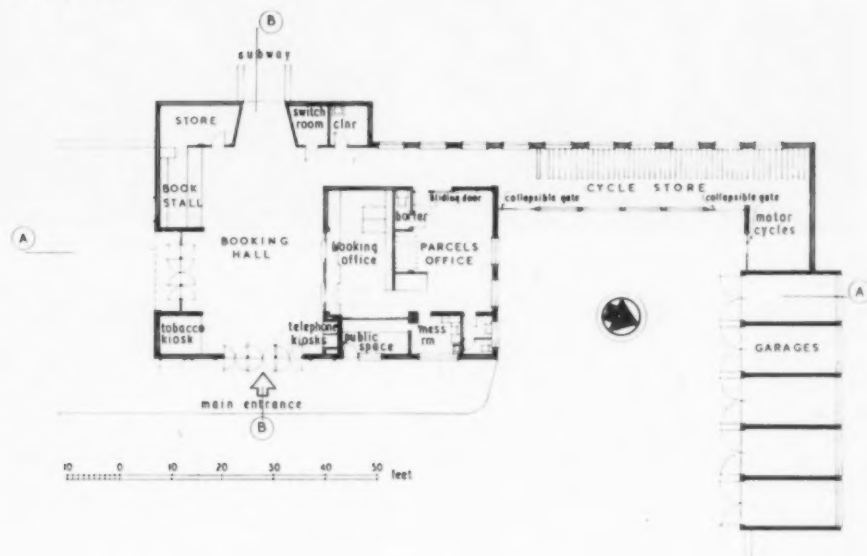
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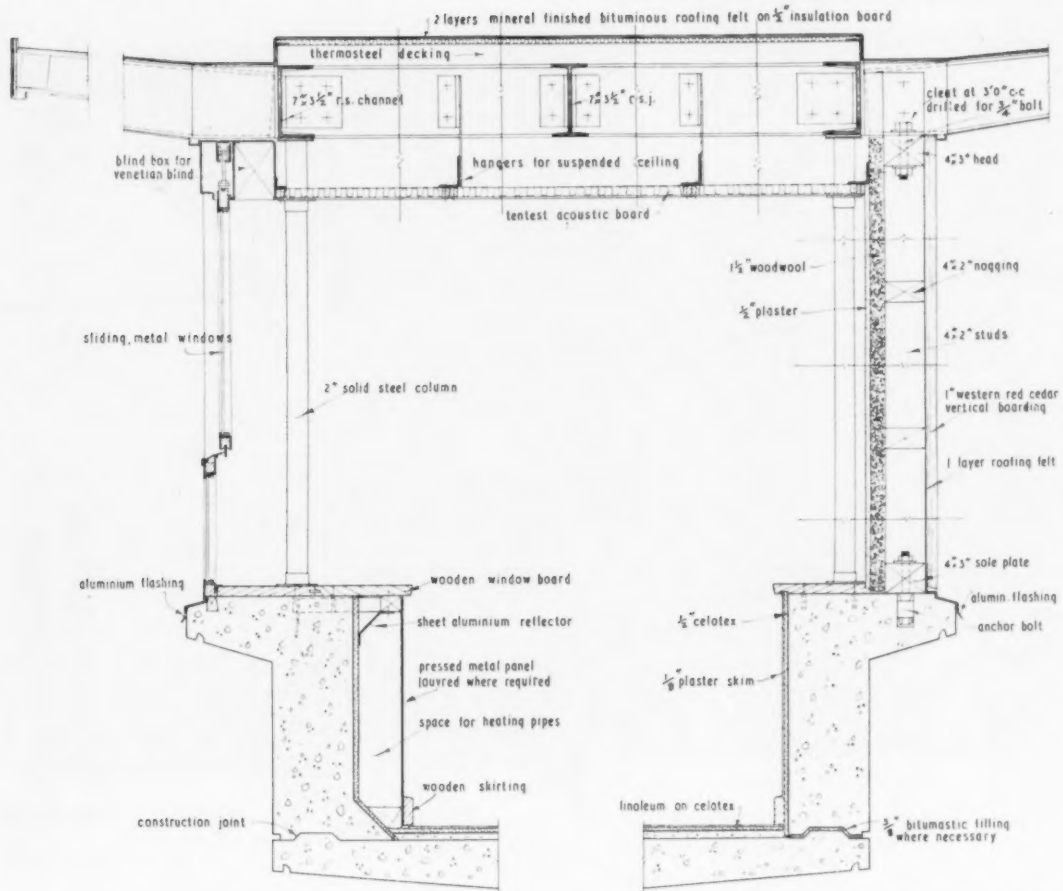


STATION BUILDING

Scale:
1 in = 32 ft

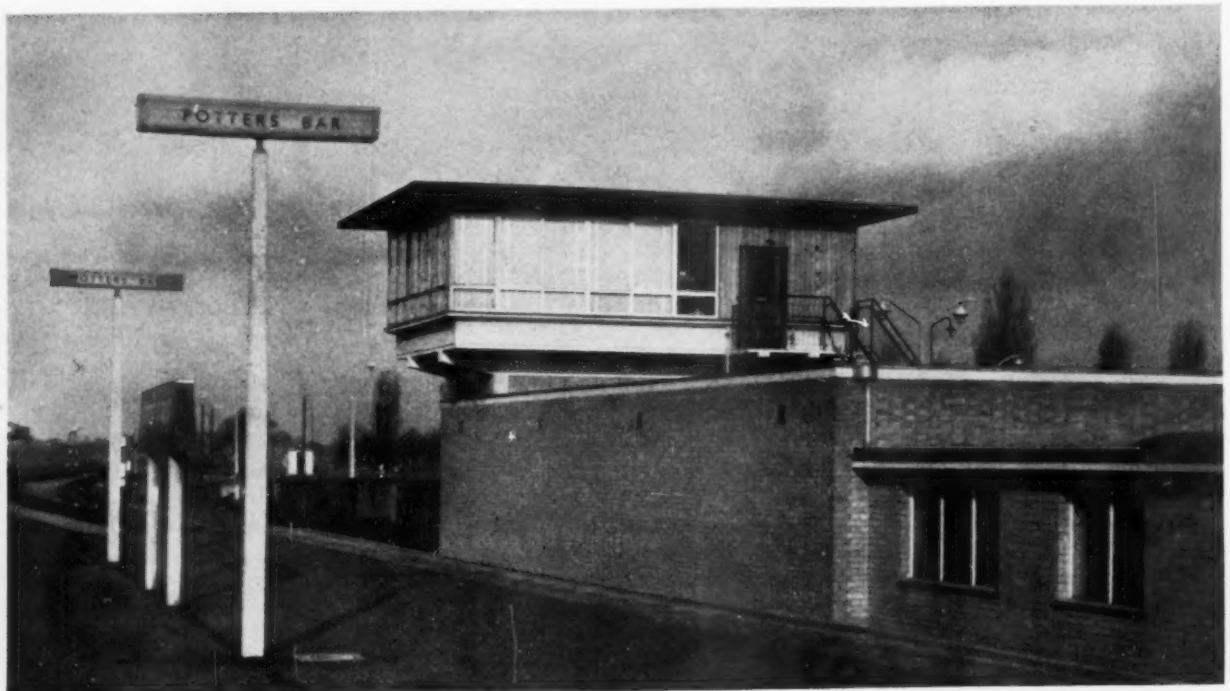
PLAN





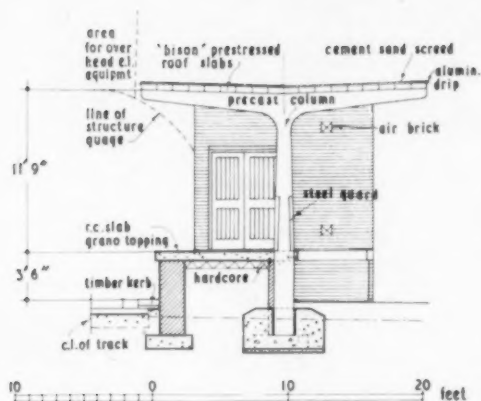
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SIGNAL BOX DETAILS





GOODS BENCH DETAILS



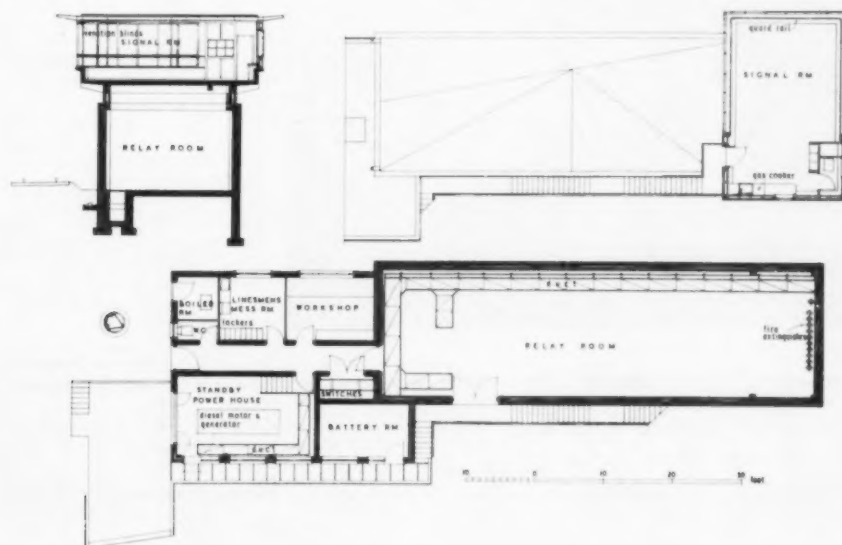
Scale:
1 in = 12 ft

Potters Bar Main Line Station

consulting engineer; main building:

A. E. BEER, A.C.G.I., M.I.Struct.E., M.Cons.E.

Quantity surveyor: IRVING TODD, F.R.I.C.S.



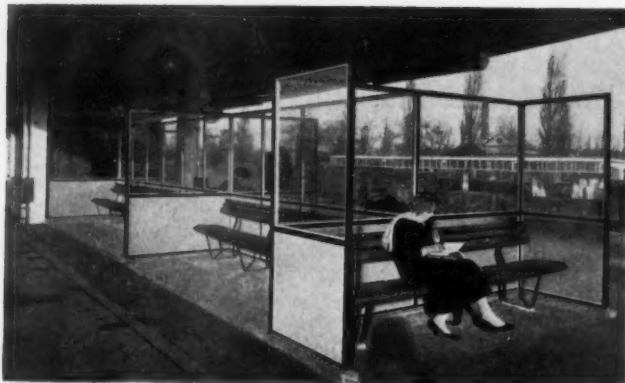
SIGNAL BOX

Scale:
1 in = 24 ft

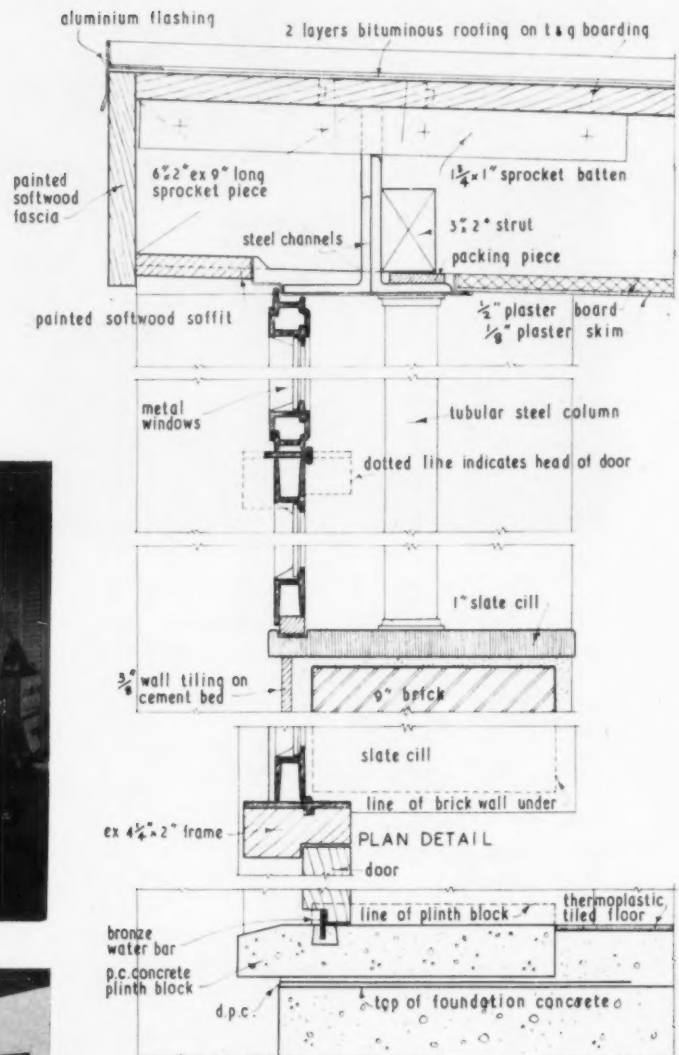
General contractors: Kirk & Kirk Ltd.

for stationmaster's house: Samuel Worboys Ltd.

Acoustic Insulation: TenTest Fibre Board Co. Ltd. Bricks: Eastwoods Ltd. (Engineering), Sydney A. Hunter Ltd (Facings) Bituminous Felt Flat Roofing Highways Construction Ltd. Clocks Gene & Co. Ltd. Collapsible Gates Potter Rax Ltd. Concrete Roof Slabs Concrete Ltd. Shockcrete Ltd. Cycle Racks Alfred A. Odoni & Co. Ltd. Dome Lights T & W. Ide Ltd. Electrical Installation Electrical Engineer—British Railways Eastern & North Eastern Region, Doncaster. Furniture Conran Furniture. Leabank Office Equipment Ltd. Heating Installation Matthew Hall & Co. Ltd. W. Richardson & Co. Ltd. Ironmongery James Gibbons Ltd. Joinery—Hardwood Doors & Frames Bever & Co. Ltd. Lighting Fittings Falk Stadelmann & Co. Ltd. (Fluorescent) General Electric Co. Ltd. Hume Atkins & Co. Ltd. Ionlite Ltd. (Cold Cathode) The Merchant Adventurers of London Ltd. Siemens Electric Lamps & Supplies Ltd. Lettering—Plastic-Enamel Filled Bronze A. J. Binns Ltd. Neon Signs Claude General Neon Lights Ltd. "Perspex" Imperial Chemical Industries Ltd. Precast Concrete Roof Slabs Shockcrete Ltd. Pressed Metal Doors & Frames Williams & Williams Ltd. Pressed Metal Lockers G. A. Harvey & Co. (London) Ltd. Pre-stressed Concrete Publicity Totem Mast Vibrated Concrete Construction Co. Ltd. Sanitary Fittings Wm. E. Farrer Ltd. Rowinson, Drew & Clydesdale Ltd. Slate Cills The Bow Slate & Enamel Co. Ltd. Steelwork (Gates) Scaffolding (Gt. Britain) Ltd. Structural Steelwork The Crittall Manufacturing Co. Ltd. Henry Hope & Sons Ltd. Thermal Insulation Fibre Glass Ltd. Thermo-Plastic Floor Tiles & Tiling The Marley Tile Co. Ltd. Ticket Collectors Boxes & Traffic Barrier Holland & Hannen & Cubitts Ltd. Ticket Office Fittings D. Burkle & Sons Ltd. Tiling—Wall & Floor Carter & Kernahan Ltd. St James Tile Co. Ltd. Venetian Blinds J. Avery & Co. Ltd. Vitreous Enamelled Iron Signs Mead McLean & Co. Ltd. Windows—Metal Aygee Ltd. The Crittall Manufacturing Co. Ltd. Henry Hope & Sons Ltd. Wrought Iron Railways & Balustrades Scaffolding (Gt. Britain) Ltd. Wood Block Floors Hollis Bros. Ltd.



PLATFORM BUILDINGS

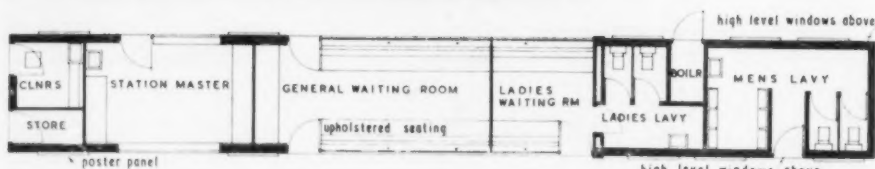


SECTION THROUGH FRONT OF BUILDING

TYPICAL DETAIL

Scale: One sixth full size

Potters Bar Main Line Station



PLAN
PLATFORM
BUILDINGS

Scale:
1 in = 16 ft

10 0 10 20 30 feet

NEWS

New L.M.B.A. President

At the annual general meeting of the London Master Builders Association on January 17, Mr. Kenneth C. F. Foster, F.I.O.B., joint managing director of Charles S. Foster and Sons Ltd. of Loughton, Essex, was elected President for the year in succession to Mr. L. J. Holloway.

Mr. W. K. Laing, M.A., M.I.C.E., Chairman of John Laing & Son Ltd., was elected Senior Vice-President, and Mr. N. S. Farrow and Mr. A. G. Miles, Junior Vice-Presidents.

Mr. D. E. Woodbine Parish was re-elected Honorary Treasurer.

Board of Building Education

The second meeting of the Board of Building Education was held at the offices of the Institute of Builders, 48, Bedford Square, W.C.1, on Thursday, January 5, 1956, under the chairmanship of Mr. F. Leslie Wallis, O.B.E., J.P., P.I.O.B. The Board has been set up by the Institute of Builders with the support and collaboration of the National Federation of Building Trades Employers, to advise on methods and standards of technical education and practical training for executive, administrative and managerial positions in building.

The following have recently been nominated by their respective bodies to serve on the Board and those present were welcomed by the Chairman:

Mr. J. Gibson representing the Ministry of Education; Sir Eric Seal, K.B.E., C.B., representing the Ministry of Works; Mr. D. A. G. Reid, B.Sc., M.I.C.E., A.M.I.Struct.E., representing the Association of Principals of Technical Institutions; Mr. T. E. Hall, Dip. Arch., A.R.I.B.A., representing the Association of Teachers in Technical Institutions; Mr. J. H. Mills representing the National Federation of Building Trades Operatives; Mr. R. E. Enthoven, F.R.I.B.A., representing the Royal Institute of British Architects; Professor J. A. L. Matheson, M.B.E., M.Sc., Ph.D., M.C.E., M.I.C.E., M.I.Struct.E., representing the Committee of Vice-Chancellors and Principals of the Universities of the United Kingdom.

It was decided to appoint an independent Chairman of the Board and a further announcement will be made shortly. A Steering Committee was appointed to prepare a suggested programme of work.

The following members of the Board were nominated as representatives to the Building Training Conference sponsored by the Joint Consultative Committee of Architects, Quantity Surveyors and Builders to be held on January 31, 1956.

Mr. G. W. E. Airey, M.A., F.I.O.B., Mr. T. H. Huxley Turner, B.Sc., F.I.O.B., Mr. G. A. Hill, O.B.E., F.I.O.B., Mr. W. K. Laing.



Mr. Kenneth G. F. Foster

* * *

Wage Claims

At the meeting of the National Joint Council for the Building Industry held in London on January 12 the Council found that in accordance with the sliding scale agreement based on the retail prices index an increase of 1d. per hour becomes due and will operate from February 6 next.

After prolonged consideration of the 6d. wage claim submitted by the building operatives the Council reached no agreement and decided to set up a joint *ad hoc* committee to allow further examination and discussion of the issues.

Other applications submitted by the operatives and employers were referred to appropriate committees.

Grants to Historic Buildings

During the last three months, 34 grants for the preservation of historic buildings or their contents have been made by the Minister of Works, acting on recommendations by the Historic Buildings Councils for England, for Scotland and for Wales.

The buildings, for which grants totalling about £90,000 have been accepted by the owners, are:—

England: Ebberston Hall, Scarborough, Yorks. Newby Hall, near Ripon, Yorks. St. John's Church, Ousebridge, York. Bramham Park, Boston Spa, Yorks. Fulbeck Hall (Entrance Gate), Grantham, Lincs. 62, 64 and 66 High St., Hadleigh, Suffolk. Salisbury Hall, Shenley, Herts. Queen Hoo Hall, Tewin, Herts. Holkham Hall, Norfolk. 17 Gough Square, London, E.C.4. Salisbury House, Edmonton, London, N.9. Uppark, Sussex. Loseley House, near Guildford, Surrey. Rousham House, Steeple Aston, Oxon. Ashdown House, near Banbury, Oxon. Ashdown House, near Lambourn, Berks. The Corn Exchange, Blandford Forum, Dorset. Creech Grange, Wareham, Dorset.

Lacock Abbey, Wilts. Stourhead, Stourton, Wilts. East Lambrook Manor, near Yeovil, Somerset. 12 and 15 The Circus, Bath, Somerset. 9 Fore Street, Chard, Somerset. Trerice Manor, near Newquay, Cornwall. Little Sodbury Manor, Chipping Sodbury, Glos. Coughton Court, near Alcester, Warwickshire. Charlecote, Stratford-on-Avon, Warwickshire. Foxcote, Shipston-on-Stour, Warwickshire. Guildhall, Much Wenlock, Shropshire. Croome Court (Stone Entrance Steps), Croome D'Abitot, Worcs.

Wales: Treowen, Wanastow, near Monmouth.

Scotland: Tannahill Cottage, Paisley, Renfrew. Abbotsford House, Melrose, Roxburgh. Barra Castle, Aberdeenshire.

Nearly 1,200 applications for aid have so far been received by the three Historic Buildings Councils, of which over 640 have so far been rejected.

APPOINTMENT

Mr. Misha Black has been invited by the Government of Ceylon to visit Colombo during January to consult with them on the general planning of the Second Colombo Plan Exhibition which will be held in that city during February-March 1957. He is in Ceylon for ten days.

Mr. Black has also recently been appointed to advise the Birmingham Chamber of Commerce on the visual improvement of the British Industries Fair in Birmingham. His plans for Birmingham will be on a long term basis assuming their implementation over a number of years.

ANNOUNCEMENT

Mr. Richard H. Pickles, A.R.I.B.A., has recently acquired the practice and premises of Messrs. Jackson & Fox, Architects & Surveyors, of No. 1, Harrison Road, Halifax.

As from January 9 his practice will be transferred to that address from 3 Wards End, Halifax.

His present telephone numbers (Halifax 62151/2) remain unchanged.

COMING EVENTS

Town Planning Institute

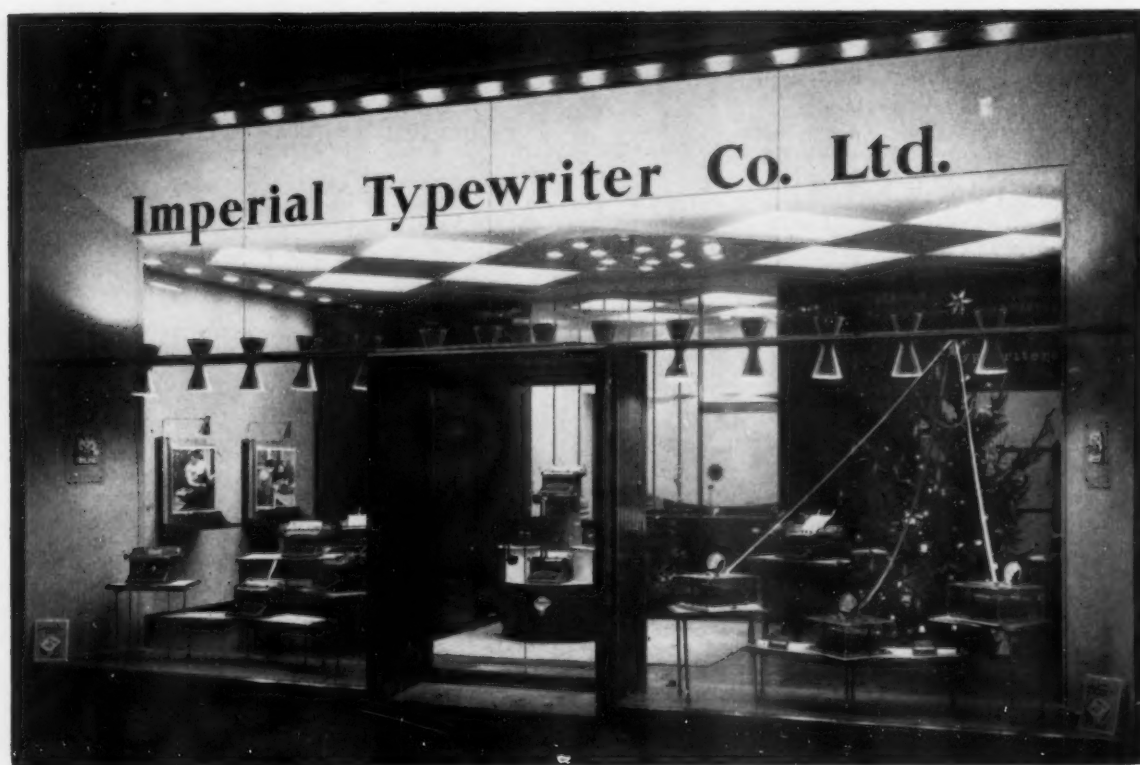
February 2 at 6 p.m. "Why is Civic Design neglected?" by Professor A. E. Richardson, P.R.A., M.A., Litt.D., F.S.A., F.R.I.B.A., at The Livingstone Hall, Broadway, Westminster, S.W.1.

The Incorporated Association of Architects and Surveyors

February 3 at 6.30 p.m. Annual Dinner and Dance of the London and Home Counties Branch, at The Mayfair Hotel.

EXHIBITION

January 30—February 18. "Clean Air and Fuel Efficiency" Exhibition. Staged by the Solid Smokeless Fuels Federation at Charing Cross Underground Station.



NEW SHOWROOM AT 85, KINGSWAY, W.C.2]

designed by J. E. SLATER Ltd.

THE main problem of this reconstruction was one of proportion. It was felt necessary to open up the whole of the frontage and to bring down the ceiling level. This was achieved by fitting a deep mitred frame in the new window area—which now extends in depth from the stone fascia of the building to a low stall riser and in width across the whole frontage—and bringing the ceiling level down to the bottom edge of the mitred frame. This frame is covered in grey Vynide and gives a very spacious effect to the window area which, on the outside, is finished with a narrow bronze surround. With the exception of the centrally placed recessed doorway and a narrow transom, the whole of the frontage is uninterrupted glass. The doors themselves are of unframed $\frac{1}{2}$ in armour plated glass with handles which echo in design the new Imperial typewriter key-shape and colour.

The lettering of the Company's name is fitted directly on to the glass above the window transom. An unusual feature is that the lettering has no definite background; during the day it shows up in colour against the grey Vynide interior frame and at night it appears silhouetted in sharp contrast to the frame, which is evenly illuminated from the diabolo light fittings on the transom.

Another design problem was to include in the premises a Demonstration Room which would be visible from the street but not itself a part of the main showroom. Advantage was taken of the original "L" shaped floor area to place the room almost centrally at the rear of the showroom, between two built up wall areas, and separated from the main area by an "open screen" of anodised aluminium tubular pillars mounted on a low, "V" grooved plinth.

The main showroom area is 29ft 0in by 15ft 0in. The rear walls are panelled in Hondouras Mahogany with flush doors in Sapele Mahogany. The Company's name, in characteristic lettering, appears on the longer wall section over a doorway and display panels. Other walls are finished in a linen-type wallpaper—Crown No. 611—and a contrast is provided by curtains which were specially designed and hand printed by J. E. Slater Ltd. The floor is tiled in cork, with a two-tone carpet designed and produced by S. J. Stockwell & Co. Ltd. in the centre.

The Demonstration room area is 12ft 0in square. The two side walls are papered, while the rear wall is fitted with a full-width mirror, engraved with a world-map in Mollweide's Equal-Area projection. The mirror,

executed by James Clark and Eaton, is so designed that the interior of the showroom can be seen from the supervisor's office immediately behind. The door surround between the Showroom and Demonstration Room is in satin finished stainless steel.

The large illuminated wall displays and the smaller display units are components which the designers have used in Imperial Typewriter Co.'s agents' premises in other parts of Britain.

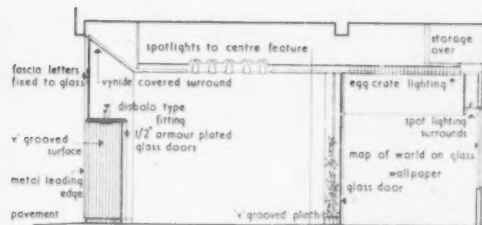
Of most particular interest is the interior lighting, which is a mixture of diffused Fluorescent and Tungsten lighting in combination. The Tungsten lighting is used to focus on the metalwork of typewriters on display, to give a sharp outline of highlights and shadows, while the softer Fluorescent lighting provides overall illumination. The fittings in the ceiling comprise a circle of 15 adjustable spotlights with Gimbal fittings over the central display piece, with standard Fluorescent battens, diffused through 3in egg-crate fittings, at either side in a chequerboard formation. A similar combination of egg-crate diffusion is used in the Demonstration Room. The two-way window lights are Diabolo fittings designed by Courtney-Pope Ltd.

The contractors were Hickman Ltd.

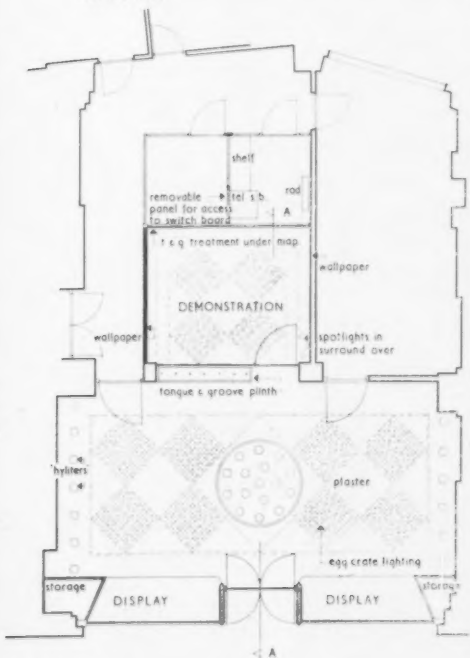


Display area with demonstration room on the left

Below: Detail of main entrance



SECTION AA



PLAN

Scale: 1 in = 12 ft



Large Scale Electricity Trials on a Housing Estate

The front of the experimental terrace on the Keadby Housing estate in Yorkshire



TO provide accommodation for married staff of an extension to Keadby Power Station in Yorkshire, the Central Electricity Authority is adding 90 terrace houses to an already existing estate for station staff. Although, owing to the relatively larger proportion of shift workers and the closeness of the place of work, these new domestic consumers could not be regarded as representative of majority conditions, it was felt that the opportunity might be taken to carry out certain large-scale trials which in previous attempts in connection with ordinary housing developments had proved difficult to arrange. The extension to the estate is now nearing completion, and below are outlined the special arrangements made under the aegis of the Utilisation Research Committee of the Authority and Area Boards.

Load Characteristics

With the exceptions referred to later, each house (average floor area about 1,000 sq ft) is fitted with a solid-fuel fire and back-boiler in the living-room, a 30gal hot-water cylinder with 2-kW immersion-heater, and a single-boiling-plate electric cooker. A three-phase, four-wire service is led into each house, with a separate meter for each phase; all the lighting and socket-outlet circuits being connected to the "red" phase, the cookers to the "yellow" phase, and the water-heaters to the "blue" phase. This scheme enables separate records to be obtained of the cooking load, water-heating load, and remaining load. For this purpose, recording instruments have been installed at the substation in all three phases, and provisions made for inserting additional recorders in all feeders and at

two points in the distribution system.

In this way it will be possible to study separately the characteristics of the cooking, water-heating, and remaining loads of the part of the estate in question, also the effect of the weather, etc., and trends due to the acquisition of additional appliances. Moreover, data on the relation between after-diversity-maximum demand per cooker, water-heater, etc., and size of group will ensue, while the meters, which will be read monthly, will give the individual households' consumptions for cooking and water-heating. There is also a water meter in the cold feed of each hot-water cylinder.

As a further feature, each cooker-control unit is combined with a switch for the immersion-heater, interlocked so that both appliances cannot be used together. After a year's operation, the interlock will be removed, and the substation load records for the following year will show what effect the change-over switch had on the water-heating load at times of system peaks.

Analysis of Cooking Consumption

In view of the different efficiency of boiling-plate, grill-boiler, and oven, their relative usage is of interest, especially in connection with the economies possible by using only special cooking utensils with solid boiling-plates. One in every four houses, therefore, has the cooker wiring segregated and the consumption of these three elements metered separately. Subtraction of their aggregate consumption from the total cooker-circuit consumption will give the consumption of the kettle with which each household is issued; a non-standard plug and socket making it inconven-

ient to plug any other appliance into the cooker circuit. Detailed information of this sort will thus become available from some 20 households.

So as to investigate the comparative performance, consumption, consumer appeal, and maintenance costs of solid and radiant boiling plates, alternate cookers are initially equipped with solid and radiant boiling-plates, respectively, which after a year's operation will be interchanged* for another

As a further feature, each cooker-year's run. Thus, every household will use for one year a solid boiling-plate, and for a similar period a radiant one. Experimental accuracy is ensured by supplying free of charge sets of three ground-black-base utensils, and the statistical analysis of the annual cooking consumption of the 90 households is expected to reveal whether, and what, savings in consumption are possible by the use of radiant boiling plates. At the end of the second year, the households having a solid plate will be given the option to keep it or have their radiant one back, whereas the cookers of the other half will be fitted with radiant grill-boilers for a year, so as to obtain comparative data on grill-boilers as well. Records will be kept of maintenance costs, and consumers' opinions surveyed.

Experimental Houses

Arising from suggestions made in an I.E.E. Paper by Mr. D. H. Parry†, a terrace of six 3-bedroom houses has been equipped with special thermal insulation to give an overall U-value of about 0.1, and with electric floor-

*To eliminate the effect of age, new plates will be fitted.

† *The Logical Approach to the Problems of Space Warming by Electricity*. Proceedings I.E.E., 1952, Vol. 99, Part 1, p. 233.

heating in living-rooms and dining-kitchens. To reduce the heat loss to an economic minimum, the cavities of all external and party walls have been filled with bitumen-bonded fibre-glass, porches with additional doors added to front and rear doors, and all windows provided with double-glazing. The heated floors, with an electric loading of 1.6kW for the living-room and 1.2kW for the kitchen, consist of plastic tiling and a 4in concrete screed, insulated of 1½in cork slabs (laid in bitumen) from the concrete slab on which the houses rest; edge insulation being provided where advisable.

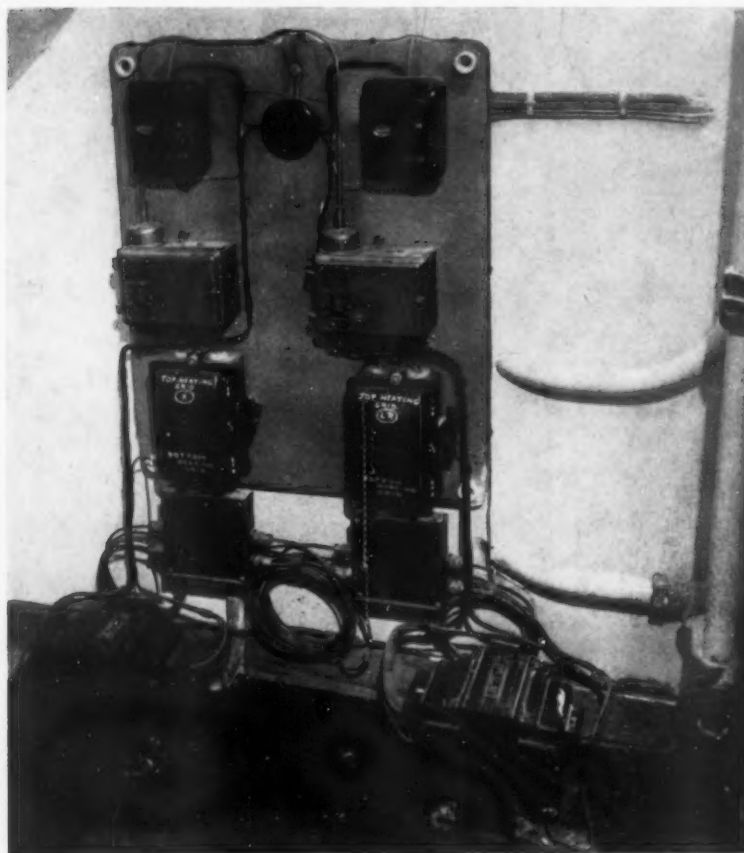
In order to study the effect the position of the heaters in the screed has on the performance, especially the thermal-storage capacity, two complete and independent grids of Pyrotenax cable with Kumanal core have been embedded, one laid direct on the cork, and the other 3in above. They are controlled by change-over switches, which are mounted on a panel in an under-the-stairs cupboard, together with the switch-heads of floor thermostats (connected by capillary tube to bulbs embedded in the floors) and the main switches for the floor-heating of living-room and kitchen.

Also visible are two small (normally boxed-in) buck/boost transformers, provided for experimental purposes to enable the heating voltage, and thus the kW-loading, to be varied within certain limits. Further, the installations of all six houses are jointly controlled by a MacLaren Thermo-Time Regulator, mounted in the feeder pillar. While the off-peak tariff of the Yorkshire Electricity Board requires the heating circuits to be disconnected from 7 a.m. to 12 noon, and from 3 to 6 p.m., this instrument automatically adjusts the length of the periods during which they are connected to the supply in accordance with the outdoor temperature. In addition, an air thermostat has been installed in each heated room, but may prove unnecessary if the common Regulator comes up to expectations.

For the trial period of three years, all thermostats will be sealed and the floor-heating supplied by the Authority at a fixed weekly charge. As it is not intended to give full comfort heating under all conditions, a supplementary electric glow fire, consisting of two 250-watt carbon lamps is fitted in each living-room and a radiant glass panel on the wall of each



Distribution board and meters. The Meter assembly in this example has been installed for the two floor heating circuits, the heat pump and individual meters for the cooker circuits. This assembly is placed in the store room.



Floor heating control gear. In the cupboard under the stairs is a control panel for the floor heating with change-over switches, switch-heads of floor thermostats and main switches. In the floor are two transformers for experimental variations of loading.

Electricity trials at Keadby

kitchen. The heat output of the latter can be varied by a Simmerstat-type switch. In the bedrooms, only socket-outlets have been provided.

Having regard to the experimental character of the scheme, it was decided to give every tenant an opportunity to adopt solid-fuel heating if he so desired at the end of the trial period. All necessary structural provisions have been made, with the flues blocked up at both ends. For the same reason, hot-water cylinders similar to those in the other houses have been fitted in the airing cupboards and adapted for possible future connection to a back-boiler.

Larder Heat-Pumps

It was also though opportune to try out combined larder cooling and water-heating by means of a heat-pump, but as at the time no commercial units were available, an offer of the E.R.A. to make up six experimental ones was gratefully accepted. So as to avoid electrically-generated heat being drawn from the kitchen, the internal larder walls and the door have been specially insulated.

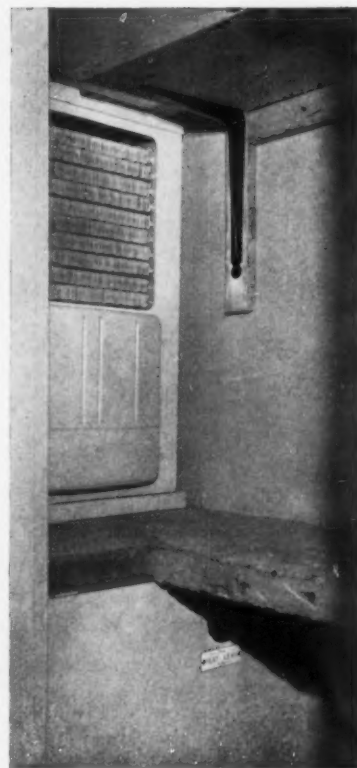
The sealed compressor unit and the condenser are enclosed in a 15gal auxiliary tank placed under the larder shelf and connected by well-lagged flow and return pipes to the hot-water cylinder. To ensure sufficient hot water being produced in cold weather, an additional evaporator is mounted externally and controlled by appropriate change-over valves. On the other hand, an automatic heat leak

enables the larder cooling to function in warm weather even if the cylinder is full of hot water and its thermostat has cut out. For emergency use, a standard immersion-heater has also been fitted.

Instrumentation

To derive all possible benefit from these heating trials, ample instrumentation has been provided. In addition to the three meters fitted in all houses, separate meters have been installed for the living-room and kitchen floor-heating circuits, and for the heat-pump. All the meters are mounted over the service intake in the store-room. One of the store-rooms of the experimental terrace also accommodates a 12-point temperature recorder with a set of change-over relays for use in conjunction with 24 thermocouples, which measure the temperature of the floor-heated rooms, the larders, and the hot-water cylinders; those for the rooms being enclosed in blackened globes suspended from the ceilings. Furthermore, the E.R.A. has been enabled to carry out scientific tests on the heat flow from the floors and other performance details, and to install for this purpose numerous additional thermocouples, connected to a multi-point temperature recorder. The feeder pillar mentioned in connection with the Thermo-Time Regulator also houses recording ammeters for the floor-heating, heat-pump, and "miscellaneous" load of the terrace.

It is hoped that these practical trials will supply much useful information.



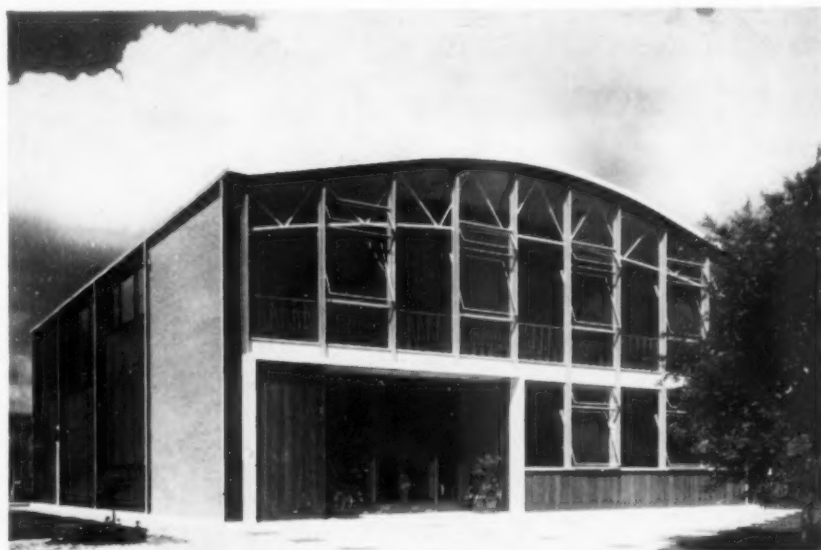
The heat pump and freezing cabinet inside the larder which is off the kitchen. Behind the panel beneath the larder shelf is a 15 gallon auxiliary tank.



The radiant glass panel on the kitchen wall, the heat output of which can be varied by a simmerstat-type switch, for supplementary heating.



The supplementary living room fire is composed of two 250W carbon lamps. The chimney breast, visible in this illustration, is to enable the house to be cheaply converted to solid fuel heating at the end of the trial period if the tenant so requires.



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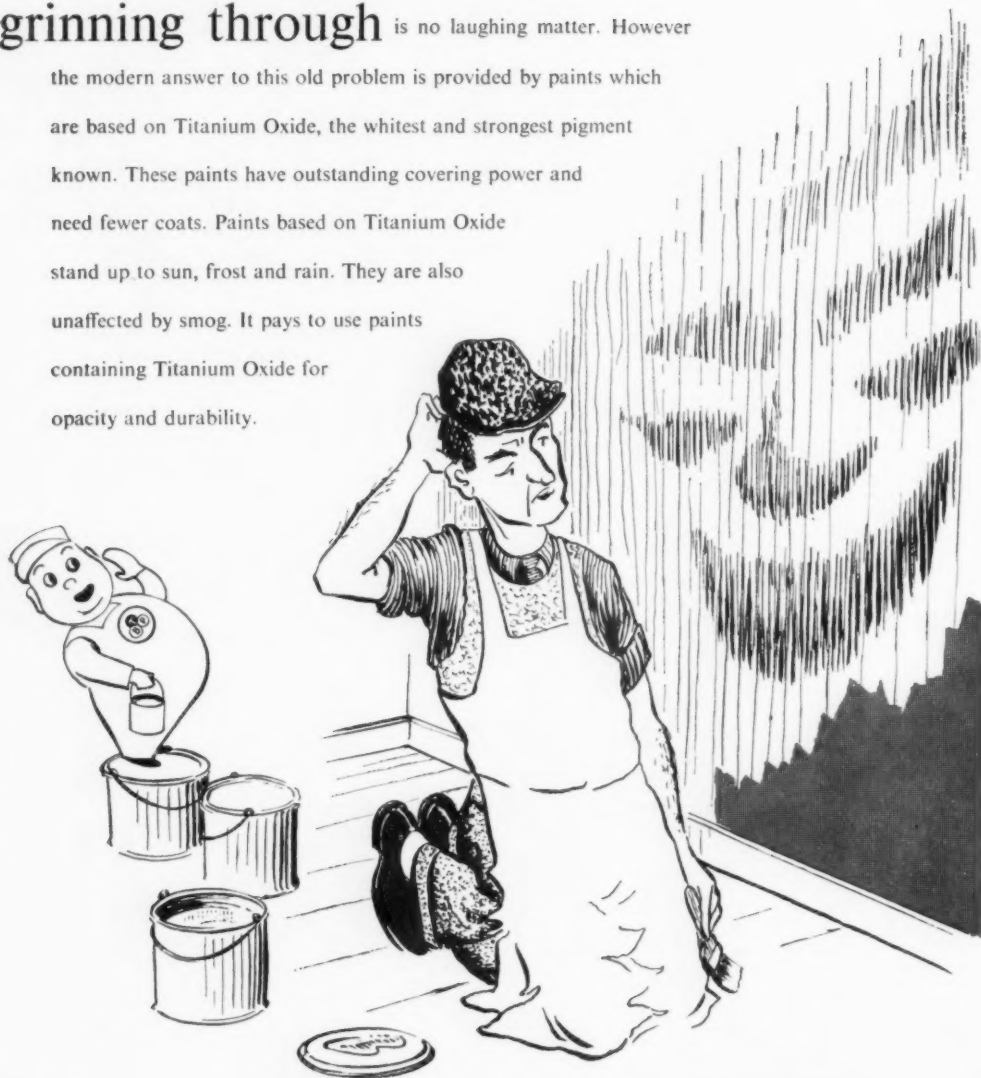
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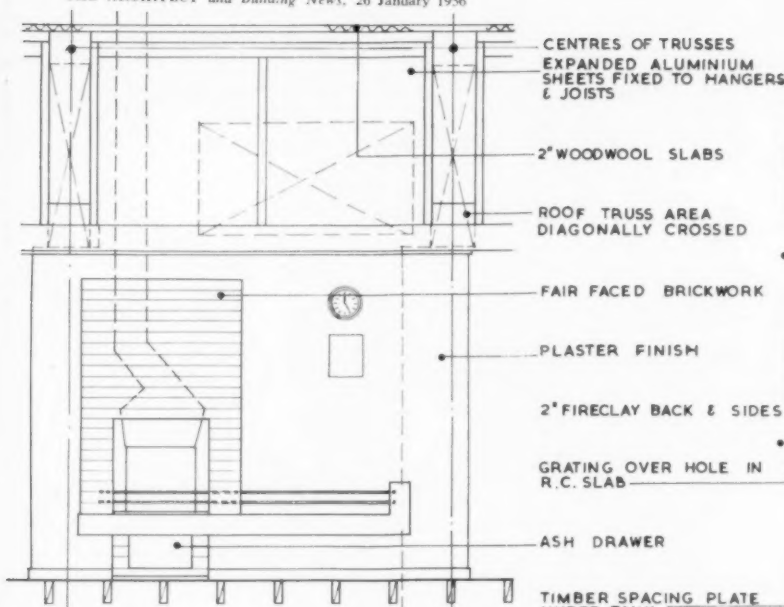
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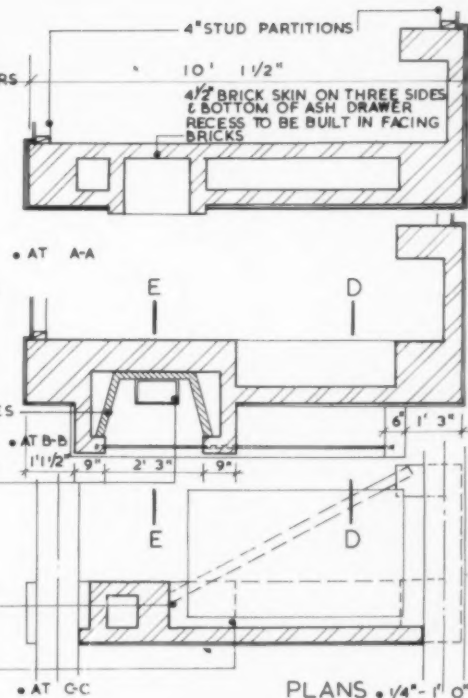
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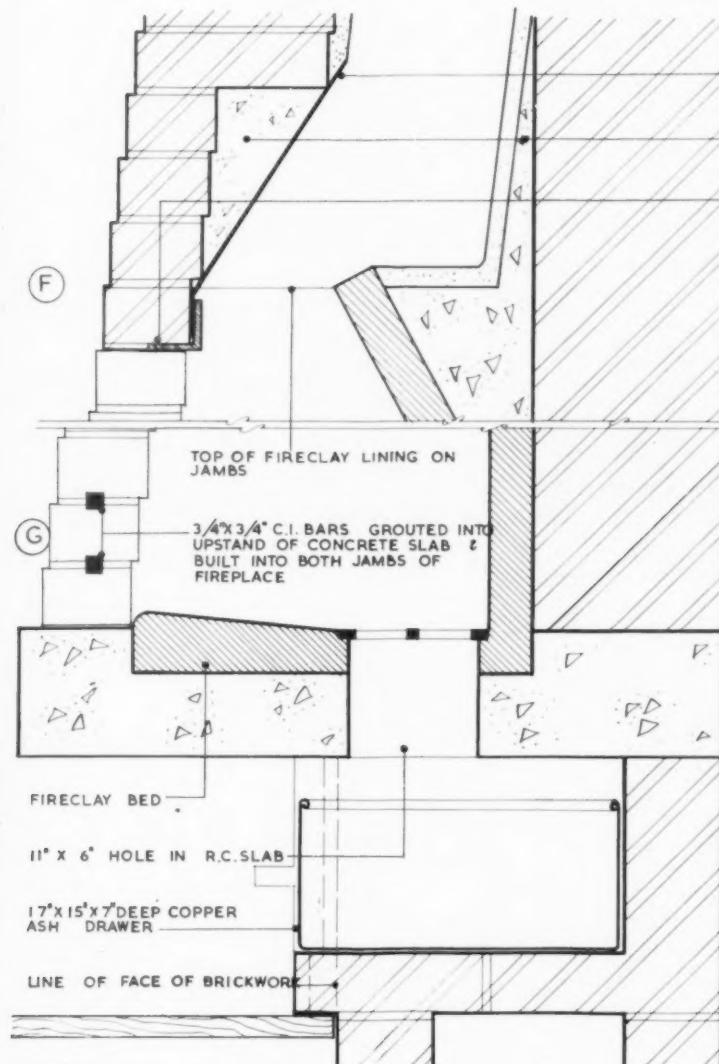
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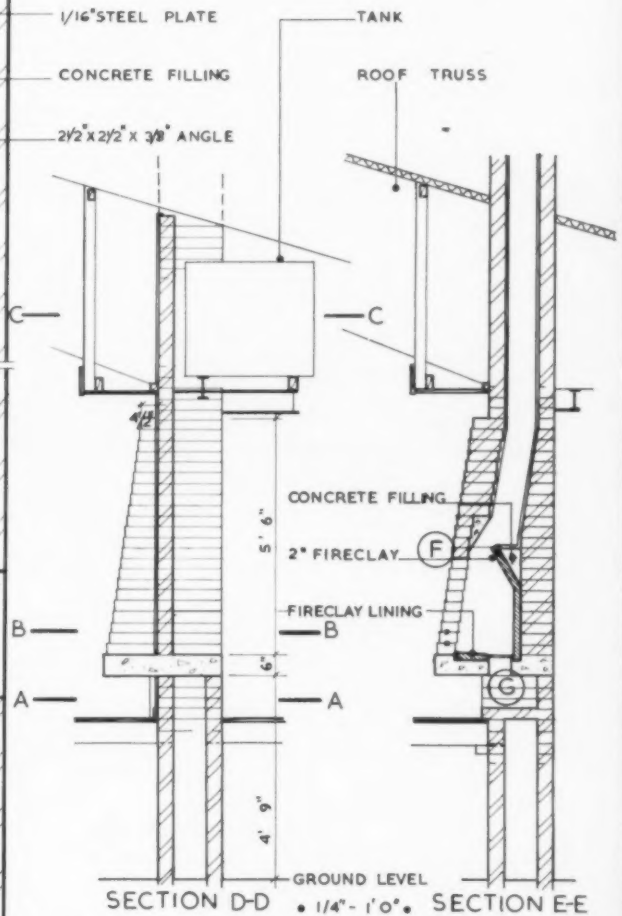
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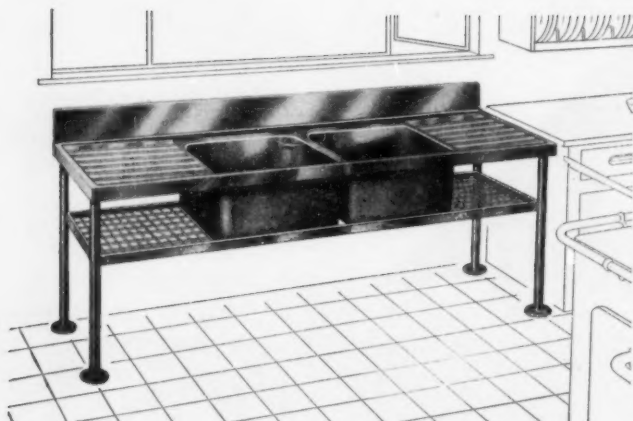
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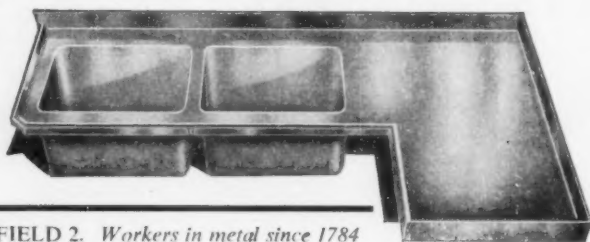


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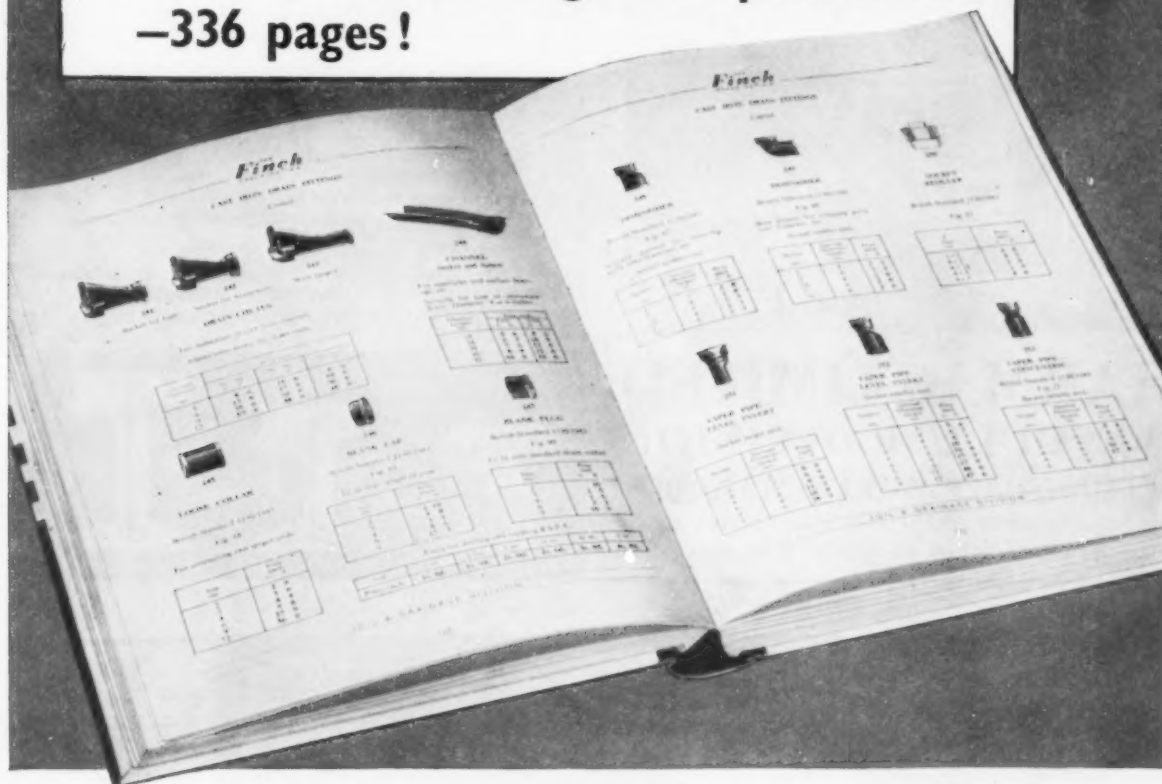
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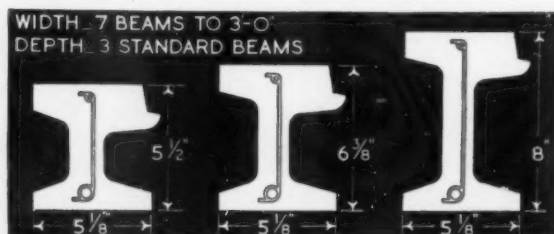
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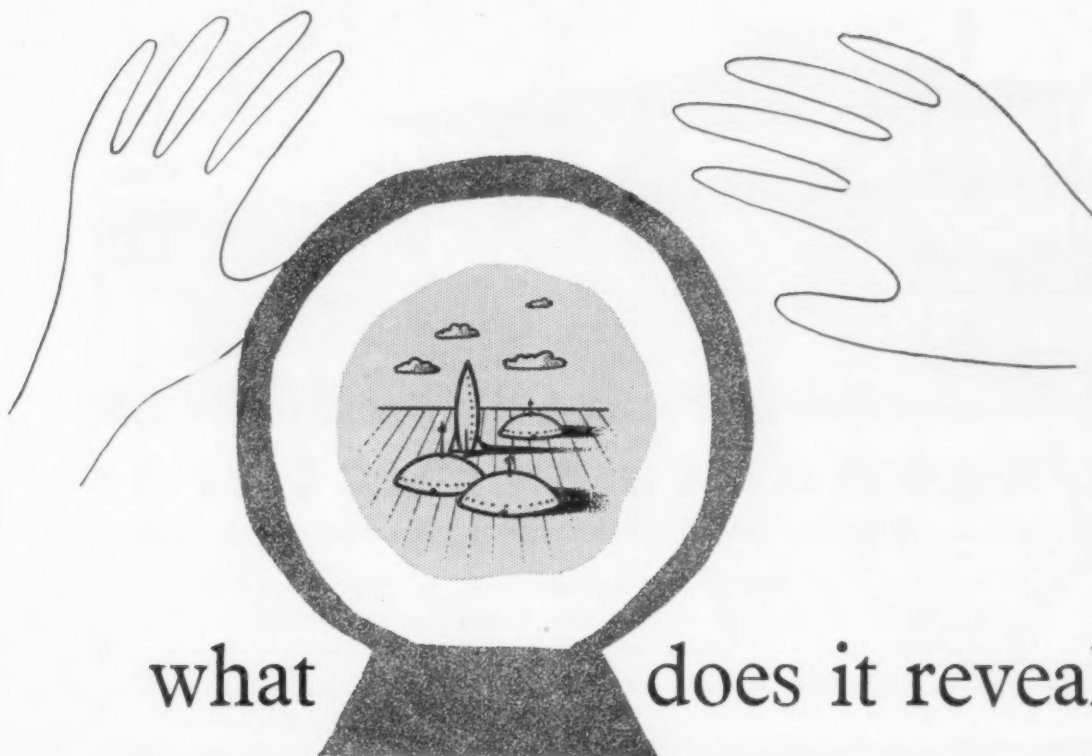
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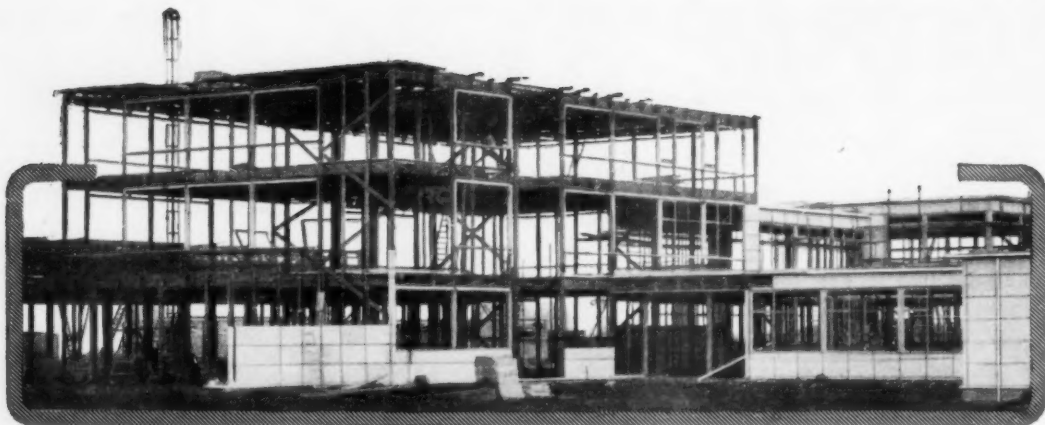
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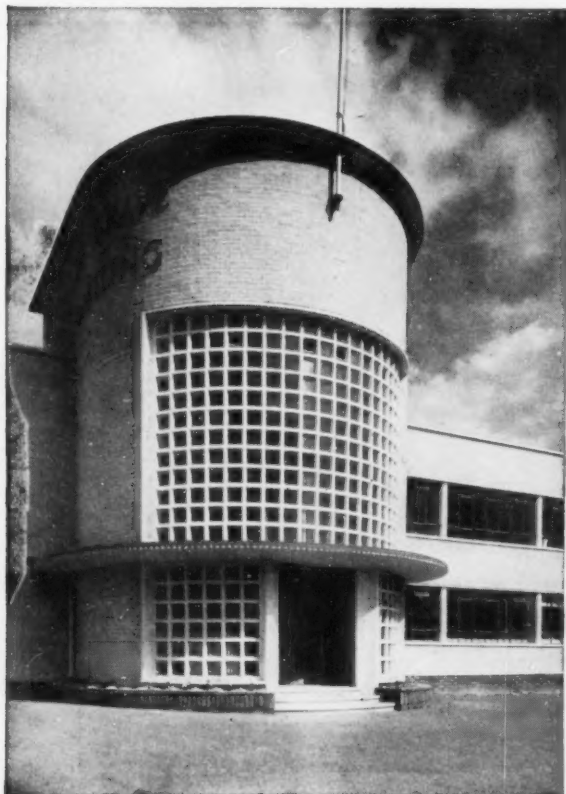


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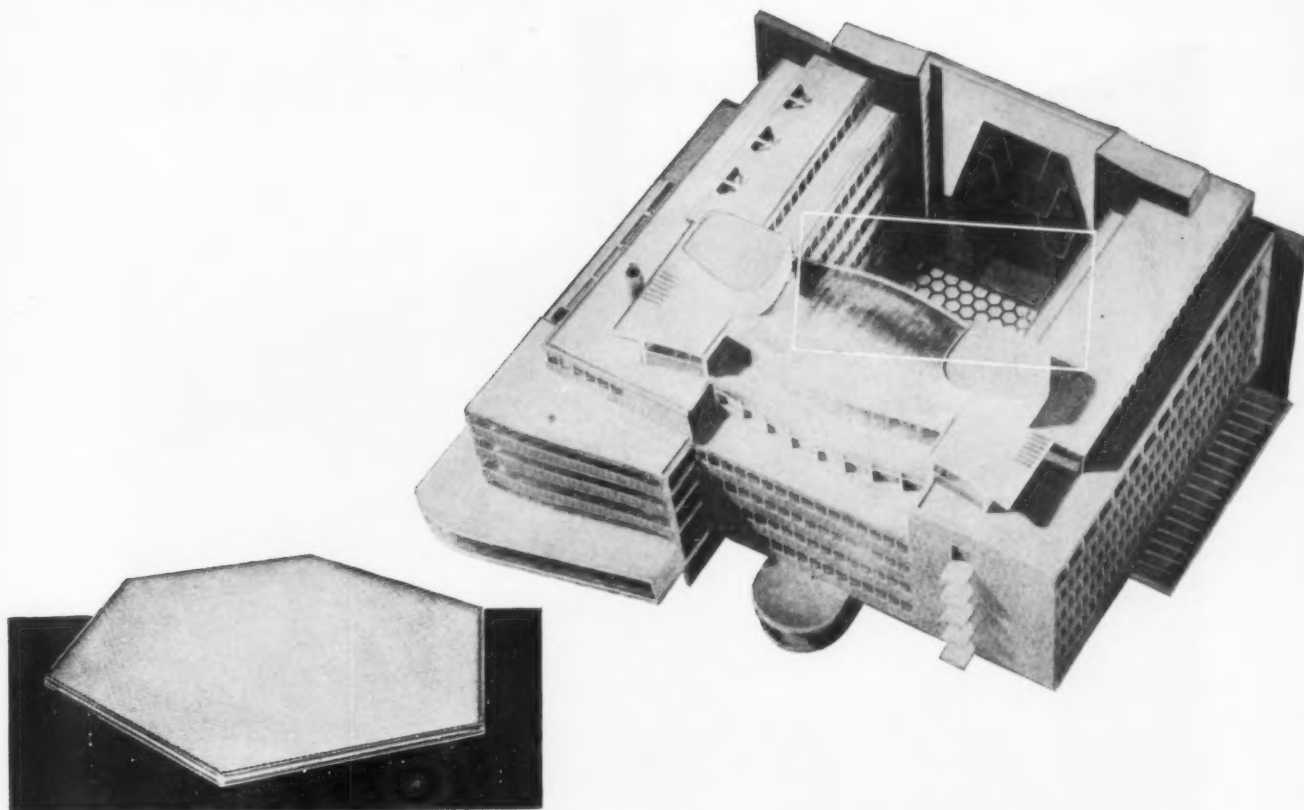
Data, applications and possibilities of Glascrete are given in our interesting Brochure P47, which we shall be pleased to send on request.



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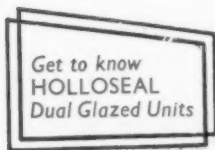
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Holloseal Dual Glazed units in the T.U.C. Memorial Building

The Conference Hall roof at ground level in the Memorial Courtyard, is constructed of hexagonal HOLLOSEAL DUAL GLAZED units. Each unit is hermetically sealed, consisting of two sheets of $\frac{1}{4}$ -in. Georgian Wired Cast Glass separated by a metal spacer and a sandwich of dehydrated air. For complete weather-proofing, each panel has a further covering of $\frac{3}{8}$ -in. Rough Cast Plate Glass. These HOLLOSEAL UNITS admit maximum light to the Conference Hall, ensure thermal insulation, reduce noise, and are quite free from condensation. HOLLOSEAL DUAL GLAZED units in $\frac{1}{4}$ -in. polished plate are also used in the building. Descriptive literature available on request.

Architects: David du R. Aberdeen & Partners. Main Contractors: Sir Robert McAlpine & Sons Ltd.



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The illustrations show:

- (1) The domed structure adjoining the new laboratories.
- (2) The annular channel under construction.
- (3) Interior view of dome and beam.

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